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P89

no.17

THE PRACTICAL PHOTOGRAPHER

(LIBRARY SERIES)

EDITED BY REV. F. C. LAMBERT, M.A.

NUMBER 17

The Pictorial Work of
Viscount Maitland.

Animal Photography

By . .

Hermann Lea,
F. E. Roofe,
Walter Self,
J. O. Grant,
Nichol Elliot,
C. J. Davies,
Rev. A. Leigh Barker,
and Others.



55 Illustrations.

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No. 17.

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Editorial and other Notes.

Contents of Our Next Number.

Our next number (ready March 1st, 1905) will deal in an eminently practical manner with the increasingly popular process of **Gum-bichromate Printing**.

This will contain eight choice reproductions of the Pictorial Work of Mr. Charles Moss. The letterpress will include original, practical, and informative articles by R. Demachy, Harold Holcroft, C. H. Hewitt, J. J. Westcott, T. Thorne Baker and others.

Other numbers in active preparation will deal with **Portraiture, Flowers, Marine and Seascape, Clouds, Genre, Lenses, Night Photography, Chemistry, Orthochromatic Photography, Telephotography, Ozotype, Iron Printing Processes, Optical Lantern, Stereoscopy, Flash-light Work, Finishing the Print, Combination Printing, Pictorial Composition, Photo - micrography, Figure Studies, Copying, Minor Printing Processes, Photographic Optics, etc.**

N.B.—Will readers who feel disposed to co-operate in the preparation of any of the above numbers kindly communicate with the Editor forthwith.

Criticism of Prints.

It is our desire to make the criticism of prints a special feature in our pages. The Editor gives his personal careful attention to this matter, and aims at making every criticism a practical, interesting, and instructive object-lesson. By paying attention to the hints thus given, often a poor print may be improved and a good print followed by one still better. In order to encourage readers to take great care in the preparation of the prints they send us, we offer **Three Prizes of Five Shillings** each, for the three best prints sent in each month. The winning prints will not be returned. (See Coupon).

Pictures for Exhibitions.

To meet the convenience of those readers who are preparing prints for special dates (exhibitions, etc.), and cannot conveniently wait for printed criticism in our columns, we have arranged that readers may send us one, two or three prints with the usual Print Criticism Coupon and a fee of *one shilling for each print sent*. Within a week the prints, accompanied by a criticism, will be returned to the sender. The return postage must be prepaid in the usual way as in Rule 5. (See page v.) The fee must be sent with a letter (marked "Print Criticism Special") and coupon to the Editor, and not enclosed with the prints. Each print must bear on the back the name and address of the sender.

Notice.

Will competitors please notice that the latest date for receiving prints for our competitions is that given on the coupon, and that we *cannot admit late arrivals?*

Out of Print. Notice.

We have been able to secure a small quantity of Numbers 5 (P.O.P.) and 6 (Developers and Developing), and shall be happy to supply applicants as far as we can. We have also heard from three or four persons having duplicate copies of Numbers 1 and 2, and will give these addresses to applicants who send postage for that purpose. We shall be happy to hear from others having copies of Numbers 1 and 2 for disposal, and also those who wish to obtain out-of-print numbers, and will gladly do our best to help them.

Our Spring Junior Salon

is being arranged. Details will shortly be announced.

Print Criticisms: Awards.

First Prize.—A. G. Turner, "The Peaceful Hour."

The other **Two Prizes** are divided between J. J. Rutherford, "On the North-East Coast"; F. A. Tinker, "Winter in the Woods"; C. B. Alexander, "When the lamps are lit"; and W. Maitland, "York Minster."

The following are all **Highly Commended.**—J. Walton, A. Benson, S. Von Lo'secke, A. E. Barker, A. Richards, R. Low.

Notice—Queries.

In response to numerous requests from our correspondents we have pleasure to announce that we will do our best as far as space permits to reply to queries of a photographic nature. Will querists please (1) write plainly, (2) on one side of the paper, (3) as briefly as is consistent with clearness, and (4) give us the indulgence of their kind patience?

An Explanation.

Will competitors please bear in mind (1) that the judging and criticism cannot be done until after the closing date of the competition, (2) that we go to press before the 25th of the month, and (3) that the criticism of a large number of prints takes considerable time?

The Champion Competition: Awards.

This event was splendidly patronised and was full of interesting surprises. Many of those workers from whom we expected most, greatly disappointed us and were beaten by others who had previously sent us second-rate work, but now showed splendid progress.

Seeing that this was a "battle among the giants," the standard was correspondingly greatly advanced, so that a bronze in this race signifies much more than a bronze under ordinary conditions. The plaques will all bear the word "champion" engraved upon them, and the certificates are being especially prepared. Intimation as to wrong initials, etc., should reach us immediately. The plaques and certificates will be sent to the winners as soon as possible. Our very hearty congratulations to each of these for a highly creditable win in a well-fought race.

P.S.—Two or three competitors entirely ignored rule 1 on page iv., *The Practical Photographer*, No. 14, and were instantly debarred.

Silver Gilt Plaque.—Miss Hilda Stevenson, "Portrait."

Silver Plaque.—James Linley, "On a Tidal River."

Bronze Plaques.—H. Light, "Ploughing on the South Downs"; J. R. Richardson, "Gleams of Sunshine."

Special Certificates.—J. J. Rutherford, "Staithes"; R. Barrett, "Still Life Study"; T. L. Hampshire, "Grouse"; H. W. Chapman, "A Study of Texture"; G. Brown, "England and Japan"; J. B. Wright, "Doorway, St. Albans Abbey"; J. Walton, "Winter"; R. Berry, "At the Vice"; W. G. Hill, "Sanctuary"; S. E. Fincham, "The Nave, Ely Cathedral"; B. Jackson, "I am the Way, the Truth, and the Life"; F. E. Seymour, "Flower Study"; G. J. Ludlam, "A February Morning"; E. A. Turner, "December in the Wood"; S. Lister, "Hoar Frost"; E. G. Fellows, "The Sphynx"; Mrs. H. Morgan, "The Squire's Daughter"; S. Tymms, "Down from the Hills."

Retouching Competition: Awards.

This competition has proved our first disappointment, not so much as regards the number of competitors as that it showed how very little most of the competitors knew about this subject. At any rate it shows how great is the need for such a handbook as No. 14 in the present series.

Our expert reports that none of the work was up to medal standard, but that E. Seymour is well worthy of a certificate, and J. J. Shaw's work is to be highly commended.



This Coupon Expires Feb. 28th, 1905.
THE PRACTICAL PHOTOGRAPHER. COUPON No. 36.

Prints for Criticism (or Queries).

RULES.

1. Write legibly, on one side of the paper only.
2. Put your name, address, and a number on the back of each print, and enclose this coupon.
3. Do not send more than three prints with one coupon.
4. State the *Month, Hour, Light, Plate Speed, Stop, Exposure, Developer, Printing and Toning* process employed.
5. If prints are to be returned, a stamped and addressed label or envelope *must* be sent **with the prints.**
6. The Editor reserves the right of reproducing any print sent in for criticism.
7. Prints should be addressed:—THE EDITOR OF *The Practical Photographer* (Print Criticism), 27, PATERNOSTER ROW, LONDON, E.C.



THE PRACTICAL PHOTOGRAPHER. COUPON No. 37.

Animals Competition.

Name

Address

WRITE LEGIBLY.

This Coupon Expires March 31st, 1905.

Animals Competition.

A Silver, and Bronze Plaque, and Certificates will be placed at the disposal of the Judges.

1. This Competition is designed to draw attention to the photography of **Animals** (vide page 42).
2. The picture may be taken either from the Pictorial or Natural History aspect.
3. Competitors may submit one, two or three (but not more) prints.
4. Each print must bear on the back of the mount the title, name and address of the producer, and full details as to date, plate, stop, exposure, etc.
5. Marks will be given for technical and pictorial quality. The mounting and titling will also be taken into account.
6. The Editor reserves the right to reproduce *any* prints sent in to this competition.
7. The Winning Prints will *not* be returned. Others will be returned, together with a brief criticism, if a stamped and addressed envelope or label be sent **with the prints.**
8. Prints must reach us not later than **March 31st, 1905**, addressed:—

The Editor of *The Practical Photographer*
(Animals Competition),
27, Paternoster Row, London, E.C.

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No. sheets	No. sheets	8x6 in.	No. sheets	No. sheets	10x8 in.
A 48	assorted colours	A0 32	B 36	assorted colours	B0 24
A1 48	grosvenor green	A01 32	B1 36	grosvenor green	B01 24
A2 48	duffel gray	A02 32	B2 36	duffel gray	B02 24
A3 48	gray bark	A03 32	B3 36	gray bark	B03 24
A4 48	playfield cream	A04 32	B4 36	playfield cream	B04 24
A5 48	rough white	A05 32	B5 36	rough white	B05 24
A6 48	dove	A06 32	B6 36	dove	B06 24
A7 48	deep sea blue	A07 32	B7 36	deep sea blue	B07 24
A8 48	autumn brown	A08 32	B8 36	autumn brown	B08 24
A9 48	smoke gray	A09 32	B9 36	smoke gray	B09 24
A10 48	fern green	A010 32	B10 36	fern green	B010 24
A11 48	coffee	A011 32	B11 36	coffee	B011 24
A12 48	wine red	A012 32	B12 36	wine red	B012 24
A13 48	black	A013 32	B13 36	black	B013 24
A14 48	olive green	A014 32	B14 36	olive green	B014 24
A15 48	iron gray	A015 32	B15 36	iron gray	B015 24
A16 48	russet	A016 32	B16 36	russet	B016 24
A17 48	slate	A017 32	B17 36	slate	B017 24
A18 48	drab	A018 32	B18 36	drab	B018 24
A19 48	brown	A019 32	B19 36	brown	B019 24

To take sizes up to 1/2-plate.			To take sizes up to 1/2-plate.		
Ordinary Thickness.	Extra Thick Series.	Contains	Ordinary Thickness.	Extra Thick Series.	Contains
No. sheets	No. sheets	12x10 in.	No. sheets	No. sheets	12x10 in.
C 24	assorted colours	C0 16	C10 24	fern green	C010 16
C1 24	grosvenor green	C01 16	C11 24	coffee	C011 16
C2 24	duffel gray	C02 16	C12 24	wine red	C012 16
C3 24	gray bark	C03 16	C13 24	black	C013 16
C4 24	playfield cream	C04 16	C14 24	olive green	C014 16
C5 24	rough white	C05 16	C15 24	iron gray	C015 16
C6 24	dove	C06 16	C16 24	russet	C016 16
C7 24	deep sea blue	C07 16	C17 24	slate	C017 16
C8 24	autumn brown	C08 16	C18 24	drab	C018 16
C9 24	smoke gray	C09 16	C19 24	brown	C019 16

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vi.

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Fig. 1. (p. 4).

Viscount Maitland.

AFTERNOON.

THE PRACTICAL PHOTOGRAPHER.

Library Series.

No. 17.

The Pictorial Work of Viscount Maitland.

By THE EDITOR.



VISCOUNT Maitland has been known as an ardent and successful pictorial photographer for some considerable time. For the last six years or so, he has been a member of the Linked Ring, and a consistent supporter of the Photographic Salon.

Born in the country, he naturally formed some attachment to country scenery, therefore it is not surprising to learn from him that the class of subject which first attracted his photographic interest was landscape. A rapid glance at the several landscape examples which are herewith reproduced will reveal to the observant student a hint of some value. He will notice that they all include water as part of the picture. This feature is eminently characteristic of English landscape as dealt with by English painters generally, from the days of Wilson and Constable down to our own times. It would take too much space to discuss the psychological and physiological reasons for this: so it must suffice for the present to say, that what has seemed good to so many painters and photographers is a matter which the young student might profitably bear in mind. At the same time let him not blindly follow any leader, or accept any rule of practice without the exercise of his own

THE PRACTICAL PHOTOGRAPHER.

observation and judgment. A moment's thought will show us that a worker who *invariably* included water in his landscape pictures, would of necessity debar himself from many desirable subjects, and also would run great risk of repeating himself, and become not only monotonous, but also what painters call "stale."

Lord Maitland wisely holds very broad and catholic views upon matters photographic. For example, he uses lenses of long or short foci as the subject may demand. Nor does he tie himself down to any one printing process. Some of the originals from which our reproductions were made are carbon prints, others platinotype, others, again, are examples of gum bichromate, and quite recently our artist has been making experiments in the newer process, called "oil printing." He wisely lays down no hard and fast rule as to mounting, framing and the like, but deals with each picture on its individual merits.

He is of opinion that photographic exhibitions, when conducted on broad lines, serve a useful purpose.

He recognises with regret that so many photographers fail to consider the subject from the artistic aspect, and are content with a mere topographical "view." Perhaps this may be accounted for to some extent by the fact, that the ease with which photography "of sorts" can be practised nowadays has attracted a number of workers who are either incapable of, or entirely disinclined to give to the pursuit, the earnest and serious thought which it so well deserves.

It is interesting to review in chronological order, the studies herewith reproduced. These carry us over a period of some ten or twelve years.

"**Give us the core, Bill**" (Fig. 4) is a typical example of a class of photographic subject which is, practically, confined to English workers. The genre, or incident picture will always find many admirers. Indeed, one may say that the beginning of photography as a means of expression of ideas was of this order. Present-day photographers are largely ignorant of the great debt they owe to Rejlander, Robinson, Blanchard, Mayland, Gale, and a few

THE PICTORIAL WORK OF VISCOUNT MAITLAND.

others who worked in this direction. The study before us is a valuable lesson in the important art of leaving out, as much as possible, those features which are not essential to the interest of the picture. The two chief actors in this humble drama are engrossed with each other, apparently unconscious of the existence of the camera, while the third who "looks on" and therefore ought to "see most of the game," has his head turned away from us. This arrangement often gives a very effective realistic touch. The little patch of strong dark in the background, is of considerable importance, and adds greatly to the tone-value of the whole. The hands are naturally posed and also aid the story. At the present moment, genre photography is somewhat neglected, but doubtless it is only a matter of time, when it will be "the thing" to attempt.

"May on the Teme" (Fig. 8).—This picture contains many useful hints to the would-be pictorial photographer. The quiet simplicity of the subject and unsensational arrangement of light and shade are features of value and importance. The long narrow shape suits the subject particularly well. The only point which seems open to question is the incisive nature of the distant sky line of hills against a somewhat light band in the sky. This, however, is a trifling matter among so very many attractive features.

"Here are severed lips, etc." (Fig. 3).—This is quite a contrast of subject and treatment, compared with the other example in this series. The ordinary male mind is not able to discriminate between and properly name the various forms of chiffon, gauze, etc., but be the drapery what it may, the light and delicately graduated effect is exceptionally pleasing. We here also see the value of a quiet background. The face in half shadow will give the portrait photographer a useful hint.

"A Hertfordshire Farm" (Fig. 5).—Here is a scene which is emphatically English in style and character. In this instance we see our artist has made a somewhat prominent feature of the "bit of water" which occupies so large a part of the foreground. The sky and cloud part also has been treated with

THE PRACTICAL PHOTOGRAPHER.

considerable freedom and boldness. This example shows us how important a part may be played by the sky of a picture.

"Afternoon" (Fig. 1).—The reader will hardly need to be told that here we have a somewhat unconventional and consequently more than usually interesting picture of the far-famed Dedham Bridge. Here again the long narrow shape of this upright landscape is as pleasing as it is unusual in connection with this subject. The broad massing of light and shade with a preponderance of darks is also a feature which shows a marked degree of individuality on the part of the artist. The use of a single tree towering up against a light sky—so favourite a device with Turner—is here employed with much success. The bridge, though not too conspicuous, rightly occupies the position of chief importance.

"An Atlantic Roller" (Fig. 7).—In our last issue something was said about the "oneness" of effect which is of such importance in forceful work. Such terms are always difficult to put into words; but an example like this will convey more at a glance than a page of verbal description. In this picture we see that all parts belong to the whole, and that what we have is complete in itself. We do not, for example, need any figures, or shipping, or rocks, or coast line. The picture without the "roller" would be uninteresting—or the "roller" with a blank or nearly blank sky would not seem consistent. The sky and water here represented are both suggestive of movement. Sea and wave pictures, as a rule, are often unsatisfactory by reason of the interest being cut and scattered. Instead of one breaking wave the usual photographer, thinking "the more the better," includes two, three or more breaking waves at different distances; with the result that one's interest skips from one to the other and we leave the picture with no vivid or direct impression.

"Sons of Temperance" (Fig. 2).—In this instance the student will at once see a composition which depends entirely on its arrangement of light and shade for its pictorial interest. We might instance this picture as an example of breadth of chiaroscuro.



S O N S E M P E R A N C E
O F



Fig. 2 (p. 4)

Viscount Maitland.



Fig. 3 (p. 3).

Viscount Maitland.

Here are severed lips
Parted with sugar breath.

It also exemplifies another of Turner's favourite devices, which has been termed the echo. Thus the strong light breaking through the dark cloud finds its echo or repetition in the juxtaposition of the light and dark horses—and is again repeated in the lights and darks of the water.

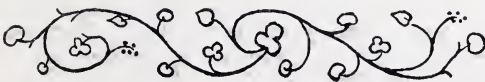
"On the Mallaig Road" (Fig. 6).—This brings us to the end of our series of very pleasant and instructive studies. Step by step we have traced the growing freedom and broadening treatment of our artist. This last picture shows us an example of what one might call a photographic sketch; bold, free and suggestive. This and the last mentioned well exemplify the saying of Hunt, that picturesqueness is a matter of light and shade.

The subject itself is of the simplest nature, such as might be found in any part of Great Britain. At first glance the student might be disposed to pass it by with the comment "nothing in it." But a second glance will emphasise many of the principles laid down in our last number, and also exemplify the thought that it is treatment rather than subject which gives us pictorial quality.

This series of studies is particularly interesting and instructive as showing us the development of the artist's style.

The pictures should be studied in the order that they are here referred to and *not* in the numerical order of the reproductions.

We feel well assured that all our readers will join us in desiring to express to Lord Maitland our sincere and hearty thanks for placing a folio of his work at our disposal and allowing us to select the foregoing for reproduction.



Animal Photography.

By HERMANN LEA.



PECULIAR and fascinating charm attaches to the portrayal of animal life; but unless the student is possessed of considerable natural zeal, is patient and painstaking, is prepared to give up a good deal of time to the production of a perfect result in the case of each individual subject, I would seriously advise him to forego specializing in Natural History work and to turn his attention to other, less exacting, branches.

To be really successful, there must exist a bond of sympathetic force between sitter and operator. This fellow-feeling is a faculty only present in certain natures, but doubtless much may be done by cultivation. We notice, for instance, how dogs, cats, or horses instinctively shun certain people; such can scarcely make successful photographers of animals. Unless there is mutual trust, difficulties will assuredly crop up directly work is commenced.

Maxims.

There are a few golden axioms which are all of such importance that I would advise their being committed to memory and invariably acted on. They are:—(1) *Patience*. Take it for granted at the outset that an unlimited amount will be requisite in nearly every case, and that we must have a really good stock to fall back on. Good temper is such a direct attribute of patience that I take it to be included naturally therewith. (2) *Perseverance*. Remember Bruce and the spider as an object lesson. Make up your mind to get a good picture of the chosen subject, and persist until you obtain it. Hope for the best, certainly, but do not be disheartened if the first attempt prove a failure. Just try again. (3) *Readiness*. This only comes after practice, but it must be assiduously developed. Never hurry, but be always ready to seize an opportunity when it is presented. (4) *Observation*. Lytton says: "Every

man who observes vigilantly and resolves steadfastly grows unconsciously into a genius." We need to study our subject carefully, from every point of view, before we can hope to do it justice; every phase, however trivial, merits consideration. (5) *Liberality*. Be generous, even to the verge of recklessness, in the matter of plates. The success of an animal picture depends, just as does the portrait of a human friend, on *expression*—a most elusive quality—so do not grudge six or a dozen plates on a good subject, or one not likely to present itself again. The writer has more than once exposed three or four dozen plates before getting a satisfactory result.

Apparatus. The choice here will naturally depend to a great extent on the sum to be expended, so I will briefly describe such as is best suited to various purposes, leaving my readers free to make their own selection. One thing is certain, it is always cheaper in the end to buy good apparatus. A clever worker may produce satisfactory results with indifferent or makeshift tools, but it is certainly a great handicap not to have the best.

The Gun-Camera. This is especially suitable for wild animals, birds, or objects that render a near approach impracticable. It consists of two tubes, within which two other tubes (to which the lenses are affixed) slide to and fro, thus enabling the adjustment of "focus." At the back, one tube is fitted with a ground-glass screen (with hood to shut out light) and a magnifying lens to facilitate sharp focussing, the other is fitted with a dark slide or changing box—preferably the latter, on account of its being more quickly manipulated. The tubes converge slightly towards each other and are "sighted" for some convenient distance—say ten yards; due allowance must therefore be made when an object is appreciably nearer to or further from the lens. Since the weight is prohibitive, except for short distances, I have designed a light carriage which can be trundled or attached to a bicycle, as wished. The lenses, accurately paired, of course, are of twenty-five inch focus, and the size of plate is $4\frac{1}{4} \times 3\frac{1}{4}$. Fig. 10.

THE PRACTICAL PHOTOGRAPHER.

The Stand Camera. For all ordinary work, such as portraits of animals, friends that can be leisurely posed at home, life-size presentments of insects, etc., at rest; domestic animals in the field, or bird subjects taken from a hiding-place or shelter of some sort, there is nothing to beat a strong, long-extension, square bellows, rigid camera, for lenses of long focus. Half-plate size camera with twenty-four inches bellows will be large enough; and as many subjects will probably only require to be of quarter-plate size, the backs should be fitted with carriers to take the smaller plates. It is no easy matter to get a camera with this amount of rack-out that will be really rigid, the fault lying, usually, in the base-board. I have found it an excellent plan to have a piece of quarter-inch well-seasoned mahogany of the same width as the camera and the same length when fully racked out; a hole is drilled to pass the tripod screw through, and the board is inserted between the base of the camera and the tripod head. Figs. 11, 12, 15.

The Hand Camera. This will be found most useful, nay, almost indispensable for certain classes of work; but to be really efficient it should be of the twin-lens or reflex type. The reflex is perhaps the better; it is less bulky and therefore less noticeable, possessing all the advantages of the former without its drawbacks. As its name implies, the image is reflected on to a ground glass, on which the image is focussed right up to the moment of exposure; it also indicates exactly the position of the subject on the plate. If made to rack out to double the ordinary distance, and so take lenses of double the usual focal length, its value will be immeasurably greater. Yet another advantage of the long rack-out arises when it is desired to take small objects life-size, or somewhat enlarged; the complete lens being, of course, used (see Fig. 9, 13). The focussing chamber should be fitted with a hood to shut out extraneous light and facilitate focussing; a magnifying eyepiece will be advantageous to those whose sight is defective or who find a difficulty in focussing in the ordinary way. A ring on each side of the camera will



Fig. 4 (p. 2).

Viscount Maitland.

Give us the core, Bill !



Fig. 5 (p. 3).

24 Hertfordshire farm.

Viscount Maitland.



permit of a carrying strap with swivel hooks being instantly fixed or unfastened; this will leave both hands free, and also tend to ensure the camera being kept rigid. The strap should be attached to the left-hand side of the camera, then passed *over* the left shoulder, *under* the right arm, and the free end fixed to the right-hand ring on the camera. This method will be infinitely more comfortable than if the camera is merely suspended by a strap round the neck. Broad webbing is the best material to use for the strap. The camera should, of course, be adaptable for use on a tripod.

Lenses. Convertible anastigmats are the most useful type to possess. Flatness of field, superb definition, large effective intensity, and the ability to use either combination separately are their chief advantages. Good work can, no doubt, be done with the ordinary rapid rectilinear, but as the anastigmat at $f/6$ will admit double the light of the R.R. at $f/8$, it is obvious that in this point alone it vastly excels. Probably many of our plates will be somewhat under-exposed, and hence rapidity of the lens is of great importance. Lenses should be used of considerably longer focus than what is generally advised for ordinary work. Ten to twelve inches for half-plate, and six to eight inches for quarter-plate should be allowed—and even then it will be found in practice that the twelve-inch lens will be very often called in for use with quarter-plates. It is understood that these lenses will be of the convertible type; if not, a focal length of at least half as long again should be chosen.

Mention should also be made of the telephoto lens. I must honestly state that, in my own experience, its use is so limited in practical work that it need not be seriously considered, although I have certainly seen excellent examples obtained by this form of lens. Probably it requires considerable experience to get the best results. I think the gun-camera, though more bulky, is certainly more serviceable. Fig. 10.

I have mentioned twenty-four inches as the rack-out for a half-plate camera. This will not serve for lenses of more than, say, twenty-inch focus; but an extending front to the camera, or the lens

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mounted in a tube some inches longer than usual, will meet the case.

Care of Lenses. Some amateurs treat their lenses in a shameful manner. The glass deteriorates by exposure to light, becoming less actinic as time goes on. When not in actual use they should be carefully shielded. Any accumulation of dust or dirt should be removed with a camel-hair brush or old silk handkerchief, and *not* with the first piece of old rag that comes to hand.

Shutters. I do not know of any shutter at present on the market that fulfils all our varied requirements. The ideal would be one giving exposures ranging from "time" up to, say, 1/1000th of a second; it should be absolutely noiseless, free from all vibration, and so fitted that no movement would be perceptible from the position occupied by the sitter. So far, the best that have come to my knowledge are the focal-plane; a simple flap-shutter fitted inside the camera just behind the lens; and a sector-shutter working between the combinations of the lens. Our hand camera will be best fitted with a focal-plane; the speed should be instantly alterable from the outside, and it should be capable of giving exposures from 1/10th second up to 1/1000th. In addition, we shall need a device, such as a flap-shutter, for time exposures. On the stand-camera, a flap-shutter will probably be more frequently used than any other, and where time exposures are permissible this form approximates to perfection, and meets the last three of the provisions alluded to above. For fast work, however, we must have recourse either to the focal-plane or sector pattern.

The Tripod. This should be more generously adjustable than the usual pattern, and it must be particularly rigid when extended to its greatest height. If at any time it be found necessary to increase the height, a simple plan is to lash a stiff cane or bamboo to each leg, and thus as it were place it on stilts. Portability, though an undoubted convenience, is of nothing like so much moment as rigidity. With a heavy camera, and a somewhat heavy lens, the usual flexible stand is utterly inadequate.

Tilting Tripod Head. A most useful adjunct will be a hinged tripod head with adjustable side struts, so that one portion can be clamped at any desired angle.* To the top board the camera is fixed by the ordinary tripod screw, while the lower portion is attached to the tripod-head. Thus the camera can be tilted to any required angle downwards, or can even look down on the top of any level surface—a by no means uncommon demand in some circumstances.

Plates. The principal *desiderata* are speed, freedom from the tendency to fog when forced in development, and absence of abnormal “grain.” All fast plates are more or less subject to this last defect; it is not of much practical importance, however, unless the negatives are intended for subsequent enlargement, in which case a very marked granular effect may be noticeable. A plate of medium rapidity will serve when working in a good light, but the advantages of having the extra speed are often so great, and the disadvantages—such as the need for extra care in manipulation—are so slight, that I prefer to use the fastest plates obtainable. Select a brand that does not fog when bromide is kept out of the developer, also one that will stand a quite warm developer without frilling (after a preliminary hardening bath has been given). For certain subjects, especially those which contain strong colour contrasts, or are in themselves of a non-actinic tone, isochromatic plates, used in conjunction with a yellow screen of suitable tint are a necessity. (Strong reds require a deeply tinted screen, pale yellows or greens a slightly tinged one.) All plates should be backed to prevent halation; too much stress cannot be laid on the advisability of this small extra trouble.

Development. For exhaustive advice on this subject I cannot do better than refer my readers to No. 6 of *The Practical Photographer*.† I will merely draw special attention to the advisability of using a developing formula that is entirely free

* Vide Fig. 53, p. 18, *The Practical Photographer*, No. 12, “Architectural Photography.”

† Developing and Developers.—*The Practical Photographer*, No. 6.

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from bromide—excepting, of course, in cases where plates are known to be grossly over-exposed. If bromide is included the best chance is not being given, either to the operator, his sitter, or to his various apparatus. We may expect to get a fairly large proportion of under-exposed plates, and we must give them every advantage possible in order to secure detail.

Printing Papers.

Excepting for really large work, or enlargements, it is more satisfactory to use a smooth paper reproducing all detail. Smooth Platinotype, Carbon, or matt-surface P.O.P. will answer for all ordinary subjects, whereas for very small work glossy P.O.P., or enamel Bromide, is preferable.

Accessories.

Some artificial backgrounds will be required, but let them be of the simplest description. It should be remembered when choosing these that the object of a background is not to form the subject for a pretty picture, but simply to serve as a monotone. They should be of a variety of shades, to suit differently coloured subjects, and must be sufficiently far away from the sitter to be out of focus—this will tend to convey “life” to the chief object, and make it stand out quite apart from its surroundings. Sheets of paper will do very well for small subjects, the rough-surface stout papers, now sold in a variety of tints for mounting purposes, are excellent. It is scarcely possible to lay down any hard and fast rules for the selection of any special colour for a particular subject. Experience alone can teach this. But it may be taken for granted that the background must neither match the colour of the sitter, nor differ from it to such an extent as to produce excessive contrast. It should be borne in mind that our object is to produce *natural* representations. Now many animals, birds, insects, etc., depend solely on their colouration for safety from their enemies, and hence we must be careful not to unduly accentuate contrasts between the subject and our artificial background or accessories. Fig. 12.

Sometimes it is a great advantage to be able to release the shutter from a distance, as for instance when it is focussed for some spot to be presently



Fig. 6 (p. 5).

Viscount Maitland.

On the
Mallaig
Road.





Fig. 7 (p. 4).

AN UNFINISHED ROOF.

Viscount Maitland.

occupied by a subject. There is an electric device that answers well ; or a long tube, fitted with an extra large ball or inflation pump, may be used. A string acting directly is not much good, the movement being too easily perceptible by the sitter.

A large focussing cloth of a rough fabric and matching the green of grass will be most useful. It should be provided with a hole through which the lens can protrude, and at the four corners there should be long tapes sewn, so that it can be securely attached to the tripod legs. Thus, when the camera is erected, the cloth will form a small tent, under which the operator can sit entirely hidden and watch his subjects.

General

Practical Hints.

We now come to consider how best to set to work with our various subjects. First experiments had better be conducted on domestic animals of a naturally tractable nature, such as dogs, horses, and the like. The chief points to be carried in mind are the maxims already laid down, together with a clear perception as to our actual object in view ; it will then be much easier to arrange a characteristic pose. Having decided on the subject, and the pose it shall assume, expend a little time in watching it ; if it is a stranger to you, make friends with it, and you will soon become aware of any peculiarities it may have, either in expression, posture, or the like. Make mental notes thereof, and endeavour to bring them out in the portrait. If on showing the result to the owner of the animal you hear the remark : " Why, you've got him doing his favourite trick of sitting with one ear up and one down," or something similar, you may consider the venture a success. It is not by any means necessary to take the whole of the subject, any more than in the case of a human being ; just the head only will often make a better picture. Try as far as possible to avoid hackneyed poses, such as the kittens in the work-basket, the dog sitting up with a lump of sugar on his nose, and similar banalities. Likewise avoid out-of-place surroundings—excepting, of course, when the motive of the picture is intended to be facetious. Be careful to choose a suitable back-ground, if a natural one is not to be had, and

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see that any other object included does not dominate over the sitter and draw the attention away from him. Aim at entire simplicity. Fig. 11.

Dogs. We will suppose a dog as our subject. First look about for a suitable spot in which to place him; this may be preferably in the shade. Arrange that the light shall fall on one side rather than from directly in front. Set up the camera so that the lens will be as nearly as possible on a level with the dog's eyes. If an artificial background is necessary, place it so far behind your sitter that it will be out of focus. Have a couple of biscuits in your pocket to be used as "persuaders," and later, as a reward. Then coax the dog to take up the position chosen, focus sharply on his eyes, insert the slide, and wait patiently until he assumes the expression required. If you want him to look particularly "alive," let him watch you break a biscuit, or imitate the modulated buzzing of a fly, an easily acquired accomplishment; this will have a far better effect than shouting "rats!" If he gets restless, or refuses to appear as you wish, take him for a short run and try again. As a rule the entire animal must be in focus, and some amount of stopping down will probably be needful, but use as large an aperture as you can, for the exposure will probably be short and under-exposure means want of detail. A good many people prefer to set out with a title for their picture, and make everything subservient to this. "Waiting for Master" is a favourite one, and is generally represented by a picture of a top hat, a pair of gloves, a hunting crop, and—a dog.

Cats. Cats are not nearly so easy to manage as dogs, and rarely allow of being interfered with save by their own masters, and not always then. The most satisfactory plan is to watch until our subject has taken up some favourite position and then cautiously approach with the camera. Groups of kittens make delightful Christmas cards when well arranged (the work-basket is quite permissible here). Gentle, unhurried handling, together with untiring persuasion, will generally effect its purpose.

Horses.

A horse always looks best without any harness, bridle or other trappings, and on this account the happiest pictures are those obtained when the animal is out in a field. He is a difficult subject, and requires careful attention. All four legs must show; the ears should be pointed forwards; the light must be at the side, and not in front or behind; direct sunlight is often advantageous, since it tends to throw parts of the body into relief owing to the shadows cast; just a bare expanse of horse is not satisfactory at all. If you essay him in the field, remember that a representation of the animal is your primary object, and do not confuse this with a landscape picture with the animal merely used to provide interest. He seldom looks at his best broadside on; such a position tends to make him appear flat, just like a wall, and there will be no indication of that "roundness of image" which is so essential. Do not forget that a chestnut or roan will come truer in light and shade if an isochromatic plate is used. The imitated buzzing of a fly will rouse and retain his interest better than any other ruse I know of. If you must take him in unnatural surroundings, let these at least be comparatively appropriate; the background of a stable, or hayrick, or hedge will serve. If the last-named is selected, however, see to it that the sky does not filter through in small white spots and blotches. If it be essential to include a human figure, let the said figure turn his back or side, and look at anything rather than at you or the camera; it is best on the whole that he look at the animal; and rather than a halter or stick, let him hold a carrot or piece of bread, thus showing the reason of being there at all.

Cattle, Sheep, Goats, etc. These all look out of place excepting when entirely unrestrained and in normal surroundings. If the portrait of an individual animal is required, it may be cautiously separated from the rest and driven into a corner of a field or yard; or we may wait until it has of its own accord somewhat isolated itself. If a group is to be taken, wait patiently until the several members are satisfactorily arranged, and try to get them when they are not all looking in

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the same direction. Pay attention to the background; it must not be of a distracting nature. The foreground, too, should be chosen with care; and see that you get it, as well as the animals, in sharp focus; if the background is out of focus, so much the better, it will make the subjects stand out in relief. Fig. 9.

Wild Animals. All wild animals are, to my mind, infinitely more interesting than domestic ones as photographic subjects. Those indigenous to our islands are few in number, and owing to the difficulty of approaching to close quarters, will give the photographer ample scope for his energies. We have two alternatives: either we can go to our subjects, or bring them to us. The former plan is more commendable when possible, since we get them in their natural haunts and with normal surroundings. Some sort of screen or shelter will be necessary, and even then we may have to wait hours for our chance. Fig. 13.

Shelters.

Several different forms of shelter have been devised and described. Those which I have found to serve the purpose best are the artificial tree-trunk, the artificial cow, and the rubbish-heap. Another excellent plan is to lead a steady old horse by a bridle, keeping him carefully between you and your quarry. I have in this way got to close quarters with hares and other wild creatures; the only precaution necessary is to keep to leeward, so that they do not scent you. Wild rabbits are comparatively easy subjects, and can be secured by taking up one's stand within range of a "bury" in the early morning or late afternoon, and waiting until they come out to feed. I have several negatives of rabbits that were taken in this manner about 6 a.m. on a summer morning. Squirrels are more difficult on account of their fondness for thick growth, but I have obtained fairly good results by first locating a "drey" containing young, placed not too high up, and waiting until the mother put in an appearance. With such subjects as these, the gun-camera is invaluable. The only plan without it is to rig up the camera and cover it with branches or ferns, focussing on a spot which



Fig. 8 (p. 3).

MAY ON THE TIDE.

Viscount Maitland.



Fig. 9 (pp. 8, 16 and 46).

GOATS ON THE SKY LINE.

H. Lea.

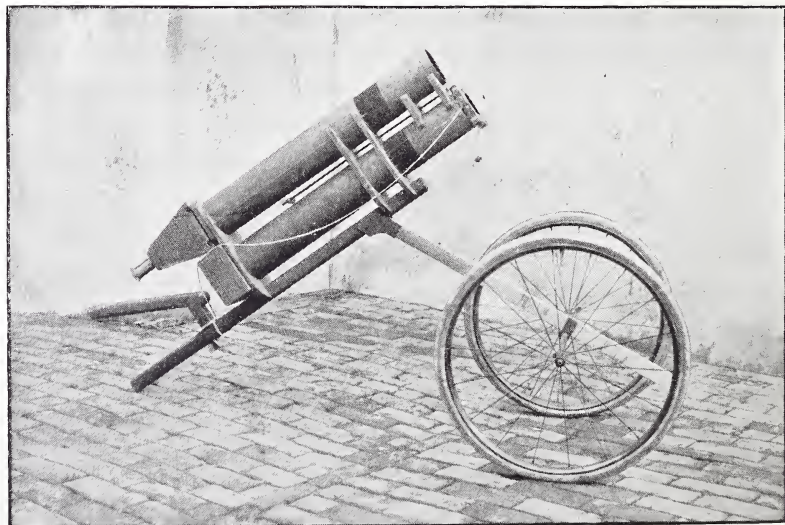


Fig. 10 (pp. 7 and 9).

GUN CAMERA

H. Lea.

you noticed the animal to have occupied; then hiding yourself in such a position that you can see what goes on, you release the shutter, either by tube and ball or electric device.

Traps. With the smaller mammals, such as rats, mice, stoats, etc., it is almost imperative to catch them and bring them home to be posed. Dormice and woodmice can be found in their nests, other varieties can be caught by hand, or in a trap; the ordinary penny mouse trap answers very well, but let it rather be the two-penny one which is larger and hence more comfortable for the captive. A box trap, made to act on the same principle as the "figure of four" or "brick trap" is likewise efficient. Having secured a desired specimen, the next thing is to induce him to pose. A well-known expert uses a large packing-case with glass sides and top; at one end is placed a suitable back-ground, the other has a hole cut in it to accommodate the lens, and appropriate "accessories" are placed on the floor; some of his results obtained in this way fully justify the trouble taken. An alternative is to keep the captive prisoner until sufficiently tame to handle without fear (on the animal's part!), when it may be induced to pose as desired. Please do not forget that the animal is your guest, and that ordinary laws of hospitality demand its being set free after it has served your purpose; also that animals require water as well as food. They should be caught only in the autumn or winter; otherwise we may, by catching the parents, leave nestful of babies to slowly starve to death. Fig. 13.

Wild Animals in Captivity.

By this I mean animals confined in public Zoological Gardens. The usual results of this class of work, though perhaps excellent in their rendering of technical details, are very seldom satisfactory, owing to an aspect, either of fear or rage, which is nearly always observable. There need be little surprise that this unfortunate expression is so general, seeing that their environment is in itself unfortunate. Some of the photographs of the semi-tame beasts are passable, but most of the really wild

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ones, such as the *carnivoræ*, haunt one with their appealing looks of wretchedness. A hand camera and extra-rapid plates are advisable when this class of work is to be taken up.

Wild Birds. Here we have great wealth of photographic material with manifold possibilities. We may strive for scientific rendering, such as form, markings, characteristics; we may use them as material for decorative work, for Greeting cards and the like; or we may essay a collection of different varieties, to take the place of the ordinary badly-stuffed, glass-cased travesty which so often does duty in a collection. Birds are easily encouraged to frequent certain spots by consistent feeding, especially during hard weather. If the food is placed in a box supported on a pole near to a window, we can get plenty of opportunities to photograph them from inside, focussing on a twig or perch placed near the box at a convenient height and on which they will readily alight; if the natural background is unsuitable, a sheet or blanket can be fixed up some distance behind the twig, and answers admirably. Ground-feeding birds, such as thrushes, blackbirds, etc., can be enticed with apples, potatoes, or lumps of bread, the camera being placed at the proper distance from the baits and operated from inside the window or from behind a shelter. The old birds feeding their young make interesting studies. After locating the nest wait until the young birds are nearly fledged, as then the parent birds are less likely to resent our approach. If they appear at all shy, a box fastened to a stick—thus simulating a camera—should be placed somewhere near the nest and gradually moved closer until within a suitable distance, when the camera is substituted; or an artificial tree-trunk, sufficiently roomy to contain the camera and the operator, is cautiously placed in position. Very often time exposures can be given, and although a certain number of plates may be wasted owing to movement, yet when we do get one right it will be fully exposed and full of all detail. Groups of young birds make excellent subjects for Christmas cards or other decorative designs. When fully fledged, but just one day or two before they can actually fly, they should be

gently removed from the nest and stationed on a branch or other support, arranged close by. (Fig. 14.) It is better to have an extra pair of hands to help in this matter, for if they once flutter off it is most difficult to gather them together again.

A Bird's Nest. Though not perhaps strictly speaking an animal photograph, it is so closely connected with our subject as to warrant inclusion, and will be found to be interesting work. Nearly all eggs have some colour, and isochromatic plates with a colour screen must be used to render them at all correctly. Take care to get sufficient surroundings to the nest to show the character of the site chosen. Removing the nest and its contents and photographing it on a table indoors is neither needful nor pleasing; it should always be taken *in situ*.

Reptiles.

Snakes, lizards, frogs and toads all make good subjects, and can usually be taken in normal environment. On a hot, sunny day in early spring we may expect to find lizards and slow-worms basking on the sandy banks of a heath, while if we go to a wood we shall probably find adders and grass-snakes. They are all extremely wary, and great caution must be exercised if we are to get within range. A snake is not an easy thing to get in proper focus when on the flat ground, but if the camera is held high, with the lens pointing downwards, it will be found much more simple; there is no need to bother about the swing-back, the distortion is not noticeable and is moreover of small account. If we prefer to catch our subjects and convey them home, we must be careful to only include such accessories as are quite in keeping. They generally sit best when out of direct sunlight; this, too, tends to prevent harsh contrasts.

Fish.

In order to obtain satisfactory photographs of fish, it is essential to catch the specimens required and pose them, or, rather, let them pose themselves, in an artificial tank. A worker who has exhibited some excellent examples in this direction, advises a narrow tank made of extremely thin glass. The ends are formed of pieces of wood, furnished with a deeply-cut

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groove in which the glasses slide. They are separated the requisite width by inserting between them part of an inner tyre tube, the valve at the bottom, pointing downwards, and the two free ends being tied tightly with string or wire. The width of the tank is thus readily adjustable by inflating the tube with more or less air, a wedge inserted between the glass and the rabbet of the uprights serving to keep it in its place when anything narrower than the whole width of the groove is required. Great care should be taken to include only such weeds or vegetable growths as are to be found in the same pond or stream from which the fish were procured; anything approaching incongruity in natural history work must be studiously avoided. Fish require the most delicate handling, and must not be confined for long at a time in the tank, unless the water is frequently changed. Certain attempts have been made to photograph fish under water, using a powerful arc lamp as illuminant—but this will probably be outside the scope of the average photographer. Occasionally, in very clear, shallow water, and a strong actinic light, something may be done. The light can be somewhat intensified by reflecting sunlight from a large mirror held at the proper angle, but the employment of an artificial tank, such as that described above, is practically the only method that will prove satisfactory.

Insects. Here we have a very wide subject, admitting of different modes of treatment. We may essay stalking the quarry as it sits on a flower imbibing nectar; or we may first catch it in a net and bring it home in a box. Yet another plan is to kill the insect and pose it as realistically as may be; but this method is, I think, objectionable from two points of view: it seems a shame to deprive the creature of its brief existence, and the results seldom look quite true to nature; moreover it is, properly speaking, still-life work. Fig. 12.

Butterflies. It will be found very interesting, not to say exciting, to take our reflex camera and endeavour to creep within shooting distance of some gaudy insect poised on its



Fig. 11 (pp. 8, 14 and 46).

PORTRAIT OF A DOG.



Fig. 12 (pp. 8, 20 and 22).

DEATH'S HEAD CATERPILLAR.



Fig. 13 (pp. 16, 17 and 46).

DORMICE.

THREE BAIRNS ON A BRIAR.

Fig. 14 (pp. 19 and 46).

H. Lea



Fig. 15 (pp. 8 and 46).

H. Lea

A DOG WITH AN OBJECT.

perch. Most butterflies possess a large proportion of colour, and isochromatic plates must be used. A fairly long exposure is generally possible, say $\frac{1}{10}$ th second, so we can be pretty certain of getting fully exposed plates, even with a screen of moderately deep colour. If, however, we elect to catch our subject and bring it home, we shall probably get a better picture. Failing a proper studio in which the light can be regulated at will, we must use a room with two windows, one at right-angles to the other; then if a table is drawn up somewhere between the two lights we shall find the lighting can be controlled to almost any desired extent. On the table is placed a bottle containing sand, and in this is held the flower or grass or twig on which the insect is to sit. Only such a flower as the insect sits on naturally when at large must be selected, and curiously enough it is seldom found to be of the same variety as that whereon the caterpillar of that particular variety feeds. A trace of honey smeared on the spot which the insect is to occupy will often claim its attention and induce it to sit quietly. Behind the flower is placed some sort of background, a perfectly plain one preferably, and of a colour that will show up the subject without giving too harsh a contrast. The best sitters are those that have been reared from the chrysalis and have never known the joys of freedom; they should be posed as soon as ever their wings are fully expanded. A fractious sitter can sometimes be rendered more amenable by being shut into a dark box for a few minutes; it will then generally sit quietly when placed on its perch. It is well to have at hand a selection of dried grasses, twigs, pieces of bark, moss, etc., etc., so that we can at once obtain a perch to suit our purpose. I have very seldom been able to get a butterfly to expand its wings when posed, excepting in the case of a specimen that has been reared; then, if the perch is gently moved until a ray of sunlight touches the insect, it will stretch its wings ready for flight, but we must be prepared to make the exposure at any instant, for it will not pose thus for long.

An excellent plan with some unmanageable specimens is to take them into the dark-room and there

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pose them on their perch. In the dark they will usually remain still, and the exposure can be made with some flashlight powder or magnesium ribbon, care being taken to modify the harsh contrasts usually present with this class of illumination.

Moths. Most moths, being night fliers, can only be photographed when at rest on the bark of a tree, or when posed in the studio, and it is almost impossible to show them with their wings expanded. Our aim, therefore, should be to show the distinguishing characteristic of the variety to the best advantage. A series of photographs, depicting the insect in all its stages, is interesting and also valuable from a scientific point of view.

Caterpillars. These are comparatively easy subjects and form interesting models, but we must always take pains to pose them only upon such plants as they naturally feed on. There is great variety of colour in some of them, and isochromatic plates must be used. Fig. 12.

Beetles. The larger beetles pose well. They need precisely the same treatment as other insects, excepting that they can be operated on out of doors in better light. Since their hard shiny wings naturally reflect strongly, we must be careful to avoid getting harsh contrasts. A liberal exposure and a diluted developer will overcome the difficulty.

Small Insects. To get at all adequate representations of the smaller insects a photo-micrographic outfit is necessary, but as this is a subject in itself,* I will only refer to it in passing. It is, however, quite possible to enlarge directly in the camera by using a short-focus lens and racking out the bellows to their longest extension.

Concluding Remarks. Unless we are striving solely for scientific accuracy it is scarcely needful to work to scale, but at the same time it is interesting to know what size the original is, and therefore whenever circumstances permit it is just as well to measure the insect and place the camera so that we get an image of the same size on the focussing screen.

* *Vide* future number on Photo-micrography.

Zoological Gardens Photography.

By REV. A. LEIGH BARKER.



TALKING and hunting are the privileges of the few, the Zoo is open to all. It is the only chance many workers have, or are likely to have, of making studies of other than domestic animals. Therefore it is not surprising that innumerable cameras of every description are to be seen in the gardens. What is more surprising is the small number of results worth looking at, that are ever produced by all these cameras.

Judging Distances.

A large proportion of these unfortunate failures may be set down to the difficulty of judging the distance of any near object. This is one of the stumbling blocks in all hand camera work, but it becomes specially formidable in making animal studies. Inside the gardens there will be very few cases in which it is safe to set the lens at infinity. Most of the exposures will be made on subjects varying in distance from 6 to 20 feet, while at the same time a large aperture will usually have to be employed, if the exposure is to be rapid enough to avoid the risk of movement. Under these circumstances extreme accuracy is required in estimating the distance; for, however artistic a landscape in a state of diffusion may be, a fuzzy picture of an animal is of no value at all. Fig. 23.

Dark Cages.

Another prolific source of plate wasting is to be found in the choice of unsuitable subjects, such as animals in small dark dens and cages, or indoor houses. In some of the enclosures groups of deer, sheep, or birds, offer very tempting subjects, and no doubt charming results can be obtained from them; but if the animals themselves are to be the *raison d'être* of the picture, and not mere incidents in a landscape, then each separate member of the group will have to be studied and posed, with reference to the general effect; and whatever difficulties arise in taking a

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single figure, they are multiplied by precisely the number of creatures included in such a group.

Patience. But the great crux with most amateur animal photographers is the need of unlimited patience. Even in the Zoo, where our subject is caged before us, it may often be necessary to wait and watch for an hour, before it assumes the desired attitude in a suitable part of its cage. The hour will not be wasted and a dozen plates will not be wasted if a really successful picture is made in the end; but time and plates are thrown away alike by hurrying from cage to cage and snapshotting at random.

Any animal that is worth a plate is worth watching before the plate is exposed. As a general rule the longer the period of watching the better the eventual portrait. Moreover the photograph is not everything; there is far more to be learnt by intelligently watching the creature itself, than from any picture one may make of it. Never allow yourself to be hurried or hustled by a friend, or a keeper, or anyone else. Never press the button until *quite* satisfied that the attitude and expression are not likely to be improved upon. Photography of animals in confinement offers just this one advantage over all stalking methods, that there is no necessity for haste, and no excuse for flurry.

The Camera. The most efficient camera for animal work of every description is one on the reflex principle, possessed of a long extension. This at once gets over the difficulty of estimating the distance, and will allow the use of the single combination of the lens, which, if it works at a fairly large aperture, will prove extremely useful. Failing this, the next best apparatus is a small camera with the lens projecting in front, so that it may be thrust between bars when need arises; the lens in this case may be set at "fixed focus," and should not be of more than 5 inches focal length. This will answer well enough for large animals, and the negatives can be enlarged if desirable; but for birds and small animals a focussing camera becomes almost a necessity.



Fig. 16 (p. 28)

GOING HOME: A DUSTY ROAD.

F. E. Roofe.

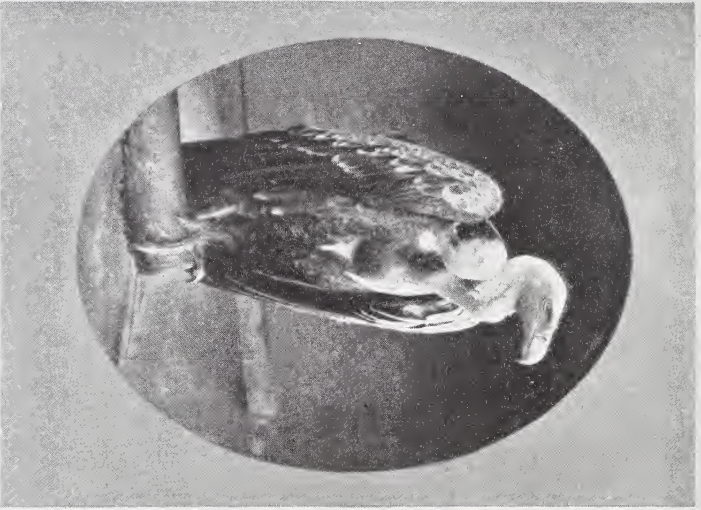


Fig. 17 (pp. 26, 27 and 47).

RAPPELL'S QUAMURE.



Fig. 18 (pp. 26 and 47).

STUDY OF A MONKEY.

F. E. ROOPE.

ZOOLOGICAL GARDENS PHOTOGRAPHY.

Keeper's Assistance.

It is a great thing to make friends with the Keepers. They will usually be found ready enough to help anyone who shows that he really takes an interest in their charges, and with their help it is wonderful how some refractory subjects can sometimes be made to pose. Satisfactory work on the lions and tigers in their outdoor cages at Regent's Park is almost hopeless without the assistance of a keeper, and a chair to stand on.

Bars. Netting.

The bars and wire fronts of cages need not be any great obstacle if only one can get close up to them. Of course they must not appear in the photograph, but it is usually possible either to point the lens through the bars, or to hold it right up against an aperture in the wire netting, so that no trace of either is seen. Until an actual trial has been made, one does not realize how easily an unbroken view may be secured even through close mesh wire netting. In the case of savage animals photography through the bars becomes a somewhat risky proceeding, and the help of the keeper had better be asked.

The Background.

The question of the bars, fences, and sheds which too often appear in the background is quite another matter. In many cases, especially if using an ordinary hand camera, there is nothing for it but to put up with them, unbeauteous as they are. If a long-focus lens is being used on a reflector or stand camera, something can be done by getting the animal out into the middle of the cage or yard, and throwing the whole of the background out of focus; but to be successful this needs to be skilfully managed.

Limitations.

Zoo photography has its limitations, for it is not possible to take photographs of large animals in captivity and to make them look as if they had been taken in their wild haunts. Therefore it is as well to recognise the fact, and not attempt the impossible.

Notes on Animal Photography.

By FRANK E. ROOFE.



Y first few notes are connected with camera work in the "Zoo." In the monkey house, on a bright day, some excellent work can be done here when there are not many people present, provided one has sufficient patience. In addition to the bars of the cages, there is also some wire netting. Probably it will surprise some camera workers to hear that photographs can be taken without the least sign of this netting showing even though one of the wires should come right across the front of the lens; but two things should be borne in mind, viz., that the lens itself must be *quite close* up to the wire and a *large stop* must be used.

The study of a monkey (Fig. 18) was taken in this way, a very rapid plate being used with a lens aperture of F/6 and an exposure of half a second.

Eagles and Vultures make some very interesting photographs, especially if the "arched recess," which is in nearly every cage, be used as the background for the bird. If possible borrow a chair from the attendant, otherwise the position of the bird will be too high in relation to the small extent of background at our disposal. If no chair can be found, the difficulty can be got over in the following manner, which will also be found very useful in landscape work if a hedge or high wall happen to obstruct our view in the foreground:—Hold the camera upside down with both hands high over the head, and look *upwards* into the finder, and if the shutter is one with a pneumatic release hold the ball in your mouth and at the right moment give it a "bite." This leaves both hands free to hold the camera steady. Fig. 17.

The exposure necessary for these birds is much longer than a novice at this work would imagine. With a rapid plate (preferably Orthochromatic)

NOTES ON ANIMAL PHOTOGRAPHY.

and stop F/8, about $\frac{1}{8}$ to $\frac{1}{4}$ of a second in a good light is required. Sunlight, as a rule, should be avoided, especially when shining full on to the bird, as the shadows of the bars will then cause very unsightly marks, but sometimes a strong side lighting can be negotiated successfully without this defect being apparent.

The study of "Rappell's vulture" (Fig. 17) was taken in June, bright sunlight, about 2 p.m., on Flashlight plate, F/8, exposure $\frac{1}{4}$ second. Developer, pyro-soda. A noiseless shutter is almost essential for this work.

Dozens of times have I seen these birds turn their heads like a flash of lightning the instant the shutter is released, if that shutter has been one of the roller-blind pattern.

Now for a few hints connected with farmyard and field work.

Sheep lend themselves most pictorially to the photographer, although they are very timid animals, and it is generally difficult to get them to do anything but turn their backs towards you.

One must not expect to walk straight into a field where sheep are grazing and get a good picture at once, for more often than not they will turn tail and run away. It is best to creep up very stealthily towards them so that your movements are hardly perceptible, and if they show the least sign of fright don't attempt to run after them, but keep perfectly still, and after a short interval try again.

When they once realise that you mean them no harm they will often let you walk in and out among them as much as you like, but you should not mind spending half an hour or so in making their acquaintance.

One of the most useful things to have with you is a dog, but it must be held in leash by a friend. Sheep will run away from a dog which is loose, but will generally stand and "face round" as long as it is held, and after a while they will resume grazing, still with one eye looking after the dog.

The best camera for this kind of work is, I think, a hand camera of the "twin-lens" type, with which the focussing can be done on a full-size finder right up to the very moment of exposure.

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The lens should be one of fairly long focus so as to avoid distortion or foreshortening. A good form of finder for an ordinary hand camera is one of the "look through" pattern held on a level with the eye; every little detail can be watched quite plainly with this finder, which is not possible with the ordinary ground glass finder. The shutter I prefer for this work is a "focal-plane," as this permits of a considerably shorter exposure being given to secure a fully exposed plate, or, if preferred, the shutter need not be worked faster, but a smaller stop may be used in the lens, and a photographer who has difficulty in estimating the distance of near objects will find this help him in securing his chief objects in sharp focus.

I should not advise the use of a stand camera for animal work in the field if a hand camera can be employed; although in some cases it is possible to obtain successful pictures with the former, and without any finder.

An example of work done in this way is shown in a flock of sheep entitled "Going home; a dusty road." Fig. 16.

I knew that these sheep were driven home every afternoon from their grazing ground through a certain gate; so getting to the spot a little before the regular time of their home-going, the camera was set up and the dark background arranged so as to show up the dust. Then the ground over which the sheep would pass was focussed as sharply as possible, and at the same time careful note was taken of some object which came nearly on the left-hand edge of the ground glass (*i.e.* the right-hand side of the picture), then I knew that when the sheep had got just past this object they would be in the position desired.

Cattle, as a rule, do not make such nice pictures as sheep, although they are not nearly so difficult to get at.

A good time to photograph them is just before "Milking-time," when they usually wait about lazily in small groups, which often form agreeable compositions. During the heat of the day, when grazing, a cow's tail is nearly always on the move, and, if possible, a lull in the "swish" should be



Fig. 19 (pp. 32 and 47).

On Guard.

W. Self.

W. Self
The Lion's Guard



Fig. 20 (pp. 33 and 47).

121h.

W. Self.

NOTES ON ANIMAL PHOTOGRAPHY.

waited for; otherwise the shutter must be worked quickly to secure the tails sharp, with the result that some very ugly effects may be obtained of the tails sticking out at all angles.

Orthochromatic plates and, if possible, a light yellow screen should be used to secure the best rendering of the beautiful shades of fawn colour and brown.

When taking photographs of single animals endeavour to get them into such a position as to show off their good "points" to the best advantage.

If the general colour of the animal is dark a background of rather a lighter shade should be selected, and *vice versa*. This background should be as plain as possible, and if a plain one cannot be found and one has to make use of a brick wall or something of that kind, then throw it out of focus as much as possible by using the lens at a large aperture.

In photographing, say, a horse or dog standing up, make sure that all four legs show distinctly.

Cats or other small pets may be placed on a table covered with a plain cloth, either darker or lighter in tone than the subject itself; and, so as not to tire the "sitter" while you are focussing, etc., try and arrange all this beforehand by focussing on some object placed in the position intended to be occupied by the animal.

The camera is best used on a tripod for this work, as one can then keep his hand on the shutter release and give his whole attention to the movements of the animal; moreover, with a hand camera one is apt to step backwards or forwards without thinking, and when working at such close quarters this is likely to result in the negative being out of focus, especially when using large stops to shorten the exposure through fear of movement in the subject.

Dogs which are generally kept chained up should be let loose some considerable time before being photographed, as they usually race about when first unchained and get out of breath, making it difficult to do anything with them while they are panting.

The Portraiture of Animals.

By WALTER SELF.



NOT only is this branch of photography full of excitement, interest, and a good test of one's patience, but also it necessitates open-air exercise, which is beneficial and invigorating to both mind and body. So much has been said upon the choice of apparatus for this particular kind of work that it is only necessary to say that a hand camera fitted with a lens of large aperture and a silent shutter is preferable—the latter at times being an absolute necessity. It is recorded that an ancient cookery book, says "First catch your hare—then cook it," and so with animal photography, find the subjects, and upon being satisfied that the surroundings are in harmony and picturesque, proceed to take the photograph. Patience is required, as also are promptness and silence. A moment's hesitation and the picture may be lost; with flurry and bustle the animal may be disturbed. Do not be over eager to make the exposure if the supply of plates be running short, for it is a common experience to find that after one's plates have been used the subject has assumed a favourable position.

Horses, when grazing, are very difficult to photograph satisfactorily, being usually somewhat frisky and often rough and untidy in appearance, but when at work, either in the wagon, in the field, or at rest when the day's work is done, many opportunities present themselves for making pleasing pictures.

Sheep and Lambs are perhaps more sought after by the photographer than any other animals, and there is certainly a charm and grace associated with these quiet timid creatures. It is generally far more satisfactory to select a small detached group than to attempt to include a whole flock, though the latter in certain instances may prove desirable. The time of year should be chosen when the sheep are in full wool, for they are dejected-

looking objects when robbed of their fleece. Shearing-time is productive of many good subjects.

Deer when sufficiently tame to approach, make first-rate subjects, and photographers who can conveniently visit Greenwich Park would be well repaid, for there these graceful creatures will feed from the visitor's hand.

Cats and Dogs are good "sitters," and the pictures obtained give unbounded delight to their owners. Flashlight has been recommended as being a simple method of obtaining negatives of domestic pets, but it would be almost impossible to induce them to face a camera on any subsequent occasion after the use of a "flash."

A visit to the Zoological Gardens in London will be well repaid—in fact, the work to be done here is almost inexhaustible. The Rules regulating photography are as follows: "The use of hand cameras (not larger than $\frac{1}{4}$ -plate), without legs, will be allowed without a permit. Ten shillings per annum will be charged for a permit to photographers with large cameras with legs, or hand cameras larger than $\frac{1}{4}$ -plate, in addition to the ordinary entrance money at the gates—the permit to be available for twelve months. Photographic operations will be subject to the control of the superintendent, and the Society reserves the right to forbid the photographing of any animal. Photographing in the Gardens will not be permitted on Sundays."

Do not choose Monday—or as it has been called "Bunday"—this being a "cheap" day, and consequently very crowded. Friday also during the summer months is well patronised by parties of school children, who occupy every point of vantage, and being well supplied with nuts and other dainties for the animals, the latter become very restless and are usually found with their noses close to the wires.

The Lions and Tigers in their outdoor cages make excellent studies, but unless one is content with the inclusion of the bars photography should not be attempted without first speaking to the attendant, who will generally provide a chair, and by coaxing the animal into a desirable position

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render it possible to obtain a picture, which without such aid would be out of the question. The rockwork in these cages does not make a satisfactory background, being of much the same photographic value in the negative as the animals themselves, and it should therefore be avoided. Fig. 19.

The young Polar Bears should be given special attention, and here again the keeper must be interviewed, or the only alternative is to make the exposure from the outer barrier, and this cannot be recommended in any instance. The brown bears in the pit may at times be induced to climb the pole, but much perseverance is required before they can be prevailed upon to exert themselves to this extent.

The Elephants leave their quarters each day just before 2 p.m., and this opportunity should be taken to get a picture previous to the harnessing for the children's ride. Adjoining the Elephant house will be found the Rhinoceros, and just beyond, the Hippopotamus, Giraffes and Zebras, and no great difficulty should be experienced in securing negatives in each case. The Giraffes, however, show a disposition either to hug the rails or to take up their stand at the back of the enclosure—too far away to photograph unless a very long-focus lens be employed.

The Hippopotamus passes most of his time during hot weather under water, only occasionally showing his nose to take in a fresh supply of air. If the keeper is at hand he would, if asked, entice the huge beast to the edge of the bath and with the aid of biscuits get him to open his cavernous jaws. It is much too dark inside the house to attempt an exposure.

Zebras are harnessed and parade the Gardens at intervals in summer, looking very beautiful and stately. A school boy, when asked by his teacher which animal a Zebra resembled, gave as his answer: "A donkey wearing a football shirt."

The Kangaroos are now provided with an extensive outdoor "run," the natural surroundings greatly assisting to make an effective picture.

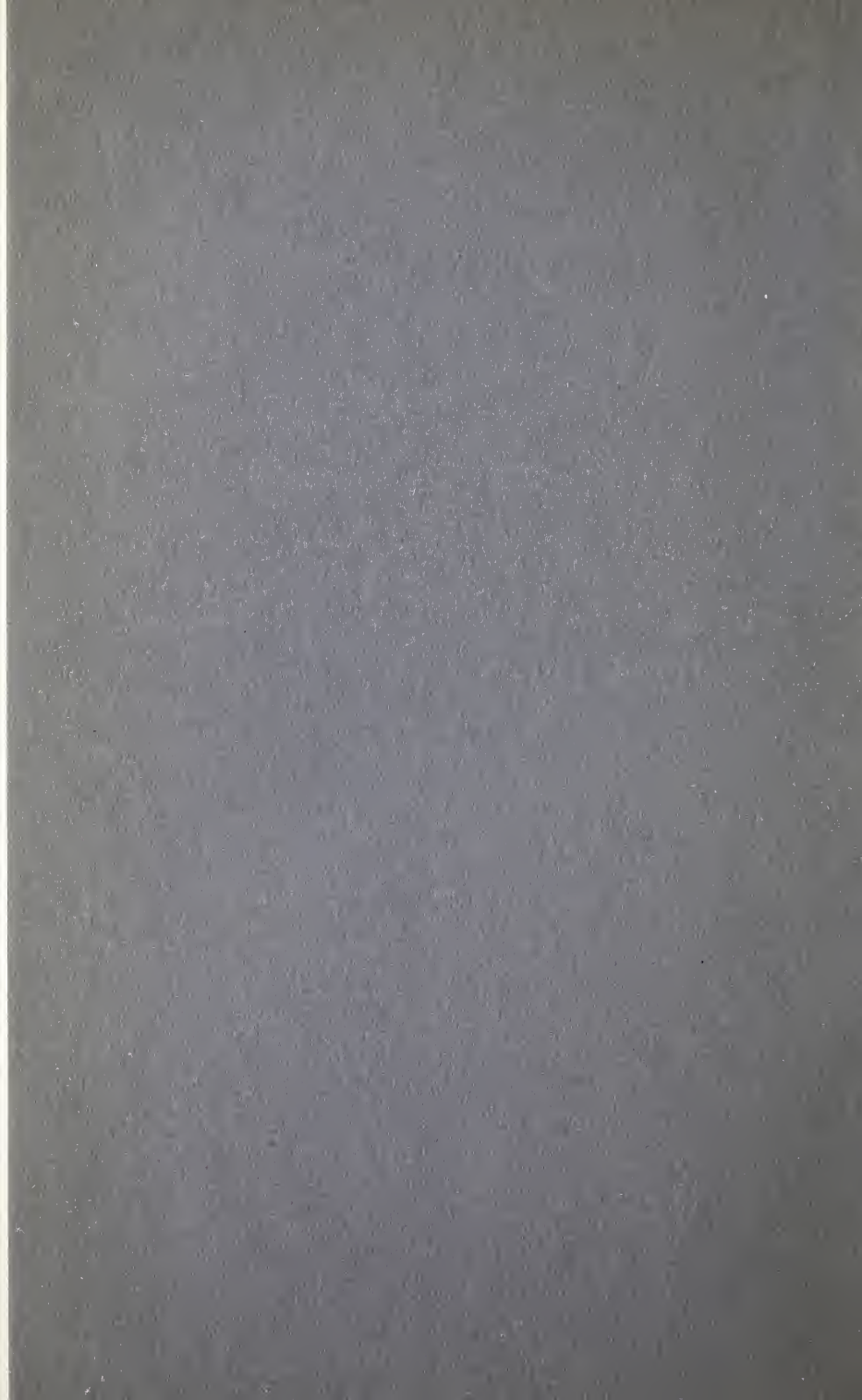


Fig. 21 (p. 47).

W. J. Appleby.

CATTLE STUDY.





THE PORTRAITURE OF ANIMALS.

The Wild Bull is a fine massive specimen, and being white, a comparatively short exposure may be given. **The Yak** is also of a light colour and has a curious appearance on account of the very long hair on his body. **The Elk and Bison** are of a brown shade and precaution must be taken against under-exposure. In the case of quadrupeds it is generally desirable to show the existence of all four legs, and when the beast possesses a tail that also should be shown. Fig. 20.

Eagles and Vultures.—A day should be chosen when the sun is obscured by light clouds, or the period just before sunset on a bright day, otherwise shadows cast by the wires of the cage will cause dark markings on their plumage. The Adjutant is a good “sitter,” or perhaps “stander” would be a better word, for he will often keep perfectly motionless for several minutes, and if the camera is held in firm contact with the rails, a time exposure may be made. When the **Pelicans** are nicely grouped good results are easily obtained, a short exposure only being required, but it is a mistake to include a large number in the picture, a single bird, or groups of two or perhaps three being preferable and easier to arrange. **Penguins** are very quaint-looking creatures when out of the water, and can be comfortably secured from inside their enclosure. The **Sea Lions** diving from the board or standing by the chair can also be taken with the help of their keeper.

The Wild Wart Hog with its formidable looking tusks, although very ferocious, can be taken if time is of no consequence. The enclosure being doubly wired, the camera must be hung over the top rail at arm's length, the operator standing upon a box or chair. The **Porcupine** may be secured in a similar manner, but in this instance no chair will be needed, the rail being much lower. Food should be thrown to the spot where it is wished to place the animal, and the exposure made without delay, his movements being very quick and jerky. A ball and tube fitting to the shutter is very convenient in the two last-named instances; the camera may then be held in the left hand by the handle on top, and hung over the rail as low as possible, the ex-

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posure being made by pressing the ball with the right hand. By this method a much lower point of view can be obtained than if the camera were held with both hands.

The Monkey House on a very bright day is well lit on the south, and with perseverance good results are to be had with exposures of $\frac{1}{2}$ or $\frac{1}{4}$ of a second at F/6, though some failures may be anticipated.

When working at very close quarters it is essential that the distance be accurately gauged or the resulting negative will be out of focus. A twin-lens camera is useful in such cases, the exact focus and size being discernible. In conclusion, the necessity of treating the keepers well is again mentioned, much being dependent upon their assistance. In no case should enclosures be entered or rails climbed without permission. Recklessness in this respect may eventually result in very stringent rules being imposed, the many having to suffer for the few.

Photographing Animals in Captivity.

By J. O. GRANT.



THE greatest difficulty in rendering animals in captivity, pictorially, is the treatment of the surroundings.

If we photograph, a lion for instance, at the Zoo, we cannot print it into a wild-looking landscape, and pretend he was not in captivity. Such treatment may look quite natural in a painting, but ridiculous in a photograph. Again, we cannot take a background with us and let it down behind the animal, and we certainly cannot feel satisfied with the background and surroundings as we find them there. If we can get the animal so placed that the brick wall forms the background, and he is not too near it, the trouble is not so great, but when we have the rocks and bars in our picture the result is often unsatisfactory and more difficult to deal with. I will describe the way I have treated each of these two cases.

PHOTOGRAPHING ANIMALS IN CAPTIVITY.

(1) **By means of an Enlarged Paper Positive.** Make an enlargement on thin smooth bromide paper—the same size as the finished prints are required—and work upon this with powdered lead by means of a stump, darkening such parts as are too light. We shall generally find the ground up to the base of the brick wall appears much too light. This requires to be darkened considerably, the hard line between the ground and wall requires softening, and the white lines in the brickwork also require toning down, as we do not want to count the bricks.

If we have included the rocks in our picture, the high-lights on these can be subdued in the same way. In the case of some of the opposite bars showing black against a white sky, the sky between the bars may be filled in. The animal requires generally very little attention, perhaps a little subduing of the light on the body or paws to give greater importance to the head. After we have obtained the effect required—a negative is made by contact on similar bromide paper. By making the enlargement in the first place we do not magnify our handwork. With this negative we have the opportunity to further subdue our background by darkening any parts that are too thin—that is, that print too dark.

Having taken this trouble we have obtained a negative from which we can make a satisfactory print by any process, without trouble: no shading part of the negative whilst printing—or any other dodging—all the work of control is done once and for all.

Fig. 24 is a direct print from the original negative.

Fig. 25 is a print from the enlarged paper negative after the above treatment.

(2). **Glass Positive.** The other method of surmounting this difficulty is to make a thin positive on glass, the size of picture required. This positive must be full of detail, but so thin that when backed with white paper it appears as if printed on the paper with glass in front. In our positive we have all the faults of the surroundings very marked.

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We now make a very light tracing on drawing paper or card of the outline of the animal. This is done by placing a piece of tracing paper over the film side of positive—tracing the outline either against a window or on a retouching desk, with a soft lead pencil. Next, we turn the tracing over on to the paper with which we are going to back the transparency and rub the outline over with anything hard and smooth which will leave the drawing impressed on the paper. We then work up the background by means of brush, pencil or stump, leaving the paper clear within the lines traced; by placing the transparency film side down

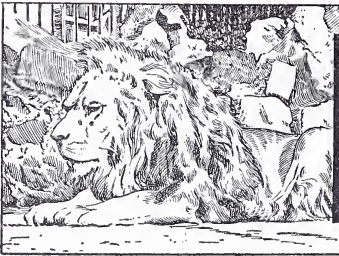


Fig. 40.

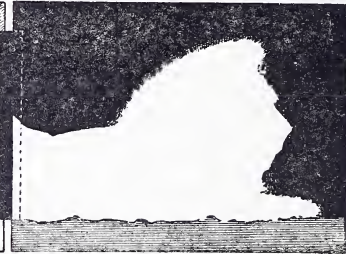


Fig. 41.

This shows the glass positive (Fig. 40) and the painted back-ground (Fig. 41). These are hinged together by means of a strip of flexible gum-paper, so that when they are in contact they are also in register, *vide* Fig. 23.

upon this paper the effect will be dark uniform background. The foreground can be strengthened in the same way—as can, of course, any other part of the picture, even to throwing part of the animal into shade. When the effect is satisfactory, a piece of glass (a spoilt negative) is placed behind the paper mask, and the whole bound together in the same way as a lantern slide. In framing, a recess is made for this to fit into and secured at the back—no other glass being required in front of the picture.

Fig. 22 shows the ordinary unbacked transparency.

Fig. 23 shows the effect of this combined with the background as shown in Fig. 41.

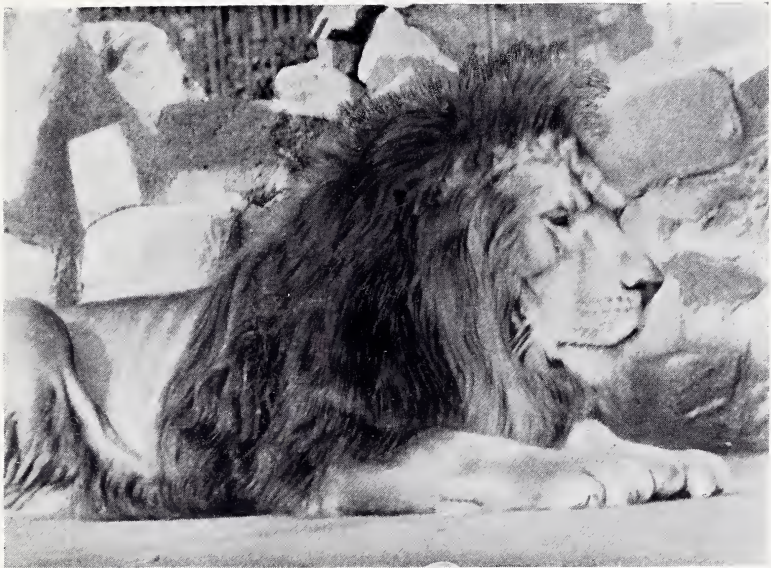


Fig. 22 (pp. 36 and 47).

ORDINARY TRANSPARENCY.

J. O. Grant.



Fig. 23 (pp. 23, 36 and 47).

BACKED TRANSPARENCY.

J. O. Grant



Fig. 24 (pp. 35 and 47).

FROM ORIGINAL NEGATIVE.

J. O. Grant.



Fig. 25 (pp. 35 and 47).

FROM REPRODUCED NEGATIVE.

J. O. Grant.

Dogs and Cats.

By C. J. DAVIES.



ALL animals make good subjects for the camera, but their idiosyncrasies must be studied.

The best stage to pose the model on is a ten-inch plank firmly supported at either end and about two or three feet from the ground. This method keeps the animal within a definite focal distance of the lens, and if the model is allowed to mount the plank by an incline he will usually remain on it with perfect confidence. On no account must he be lifted up. The background should in all cases be kept well away from the model, say three feet behind the plank, and a plain one of medium tint is most satisfactory.

Dogs. There are many reasons for photographing dogs and this must be borne in mind when arranging the surroundings. If a show specimen is the subject our aim will be to emphasize the points for which he is valued; but in any case a few accessories, such as a live rat in a cage, will come in useful when the critical moment for exposure arrives. Never cajole the model with food, as a dog who is thinking of his nether chest always fails to carry his ears and tail like a gentleman. When portraying the toy varieties, a cockchafer enclosed in a common household matchbox is useful for attracting attention.

Cats. The golden rule when dealing with cats is to make them comfortable. A contented cat will pose herself; a discontented cat will pose the photographer.

Cats may be lifted and placed where required; it is usually the only method of getting them there. The best system to follow when dealing with cats is to transgress all the advice given about dogs. A cat's best time for posing is after the morning meal; she will then be contented to remain on the plank for an hour at a time, and her poses during the general clean-up will lead to many interesting exposures. Never expect a cat to sit on a bare plank.

Photographing Kittens.

By NICHOL ELLIOT.



UNLESS one has a liking for these little lively animals the subject had better be left alone, for one must be on good terms with one's models, and much patience will be required. Caressing and gentle handling may succeed, but forcing will surely fail. One must be ever ready and alert to seize any pleasing pose.

The best time to photograph cats or kittens is when they are sunning themselves in some favourite place, for instance a window-sill or chair. After a nap kittens are particularly frisky, so that it may be desirable to wait awhile until their activity has somewhat subsided.

It is convenient to use a small platform a little below camera level. A small oblong table or packing case will serve. If the platform is of such size that it just coincides with the edges of the ground glass this will be found a great help in getting the subject into a desirable position. Brown paper fixed to a wall serves well for a background. Fig. 28.

For a platform one may use an old-fashioned, wide-backed, large-seated chair, suitably draped. A shutter which makes the slightest sound is fatal to success. The drop shutter described on page 39 is suitable.

Other small Animals. The most satisfactory method of tackling the smaller animals such as ferrets, guinea pigs, rats, rabbits, hedgehogs, etc., is to construct a shallow hutch 2 ft. long, 1 ft. deep, and 1½ ft. high. This hutch must be lined with a light distemper paper and the front fitted with a sheet of plate glass, while the top of the hutch should form a hinged door through which the animal or accessories may be inserted. If one end of the hutch be provided with a glazed window a useful sidelight will always be available.

Instructions for the making of a Photographic Drop Shutter.

By NICHOL ELLIOT.

FRETWOOD, walnut, or mahogany, will suit admirably for its construction; but canary pine, or whitewood may be used, and the tyro will find it much easier to work. The sliding shutter, however, had better be of hardwood. Small brass screws, three-eighths, and one quarter inch long, and also some glue will be required for fixing the various parts together.

Let the glue be thin in consistency, work in a warm room, warm the parts to be glued, and use it sparingly.

The backpiece E, Figs. 43 and 44, is planed and trued up first, using care to get it perfectly flat, *i.e.*, without twist, as on this will depend the easy working of the slide. Cut the aperture, Fig. 43, the same size as the inside diameter of lens tube.

The guides for the sliding part, F, Fig. 44, can either be made by giuing two strips of wood, the required width together, as shown at G, or by cutting from the solid the necessary checks.

This can be simply done by the use of a simple tool. Details for the making of this are given below (see Fig. 48).

Glue and screw the guide pieces to the back piece, taking care to get them perfectly parallel between the inside edges, the outside edges can be planed off afterwards.

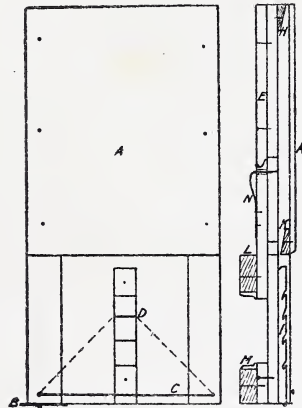


Fig. 42.

Fig. 43.

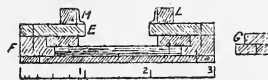


Fig. 44.

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The slide, Figs. 45 and 46, should be cut out roughly at first; then true up the sides carefully, cut out the aperture, and finish off the edges, measuring from the sides of aperture. Make the slide to fit easily, but not too loosely, between guide pieces, then prepare the stop *H* and the piece *I*, and fix on with glue and screws. Having fitted the sliding piece, mark where the top of the exposing aperture in it comes on the back piece, *J*, Fig. 43, then cut out the small hole in the centre of the back piece at that point, *J*, Fig. 43; this is for the releasing spring. The cover piece *A*, Figs. 42 and 43, is now prepared, it can be made of thinner wood than the other parts, and to the bottom inside end of it, the stop *K*, Fig. 43, is fixed. This cover piece is attached with small screws only, so that it can easily be detached should anything go wrong with the slide. The stop piece on the top of sliding part, engages with the stop on the cover piece, the wedge shape doing away with any tendency to rebound.

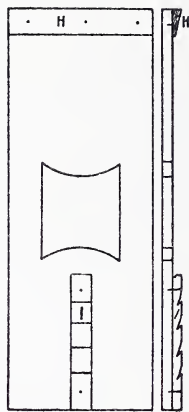


Fig. 45. Fig. 46.

The piece *L*, Figs. 43 and 44, for attaching the shutter to the lens, can be made of thick leather, cutting the aperture so as to fit the lens tube firmly; or what is better, it can be made of wood, cutting the aperture of sufficient size to allow of the use of rubber moulding *M*, Figs. 42, 44. This moulding can be obtained from the leading photographic dealers. For focussing, the shutter is kept open by the small brass release, *B*, Fig. 42, this engages in a notch cut in the sliding shutter. This can also be used as a finger release.

In the centre of a small block of hardwood of about three by two by one inch in dimensions, and about half an inch from one side, is inserted a one-inch long and fairly thick screw. The head of the screw is allowed to project the required distance, and, of course, is screwed or unscrewed, to suit the size of cheek required, see Fig. 48.

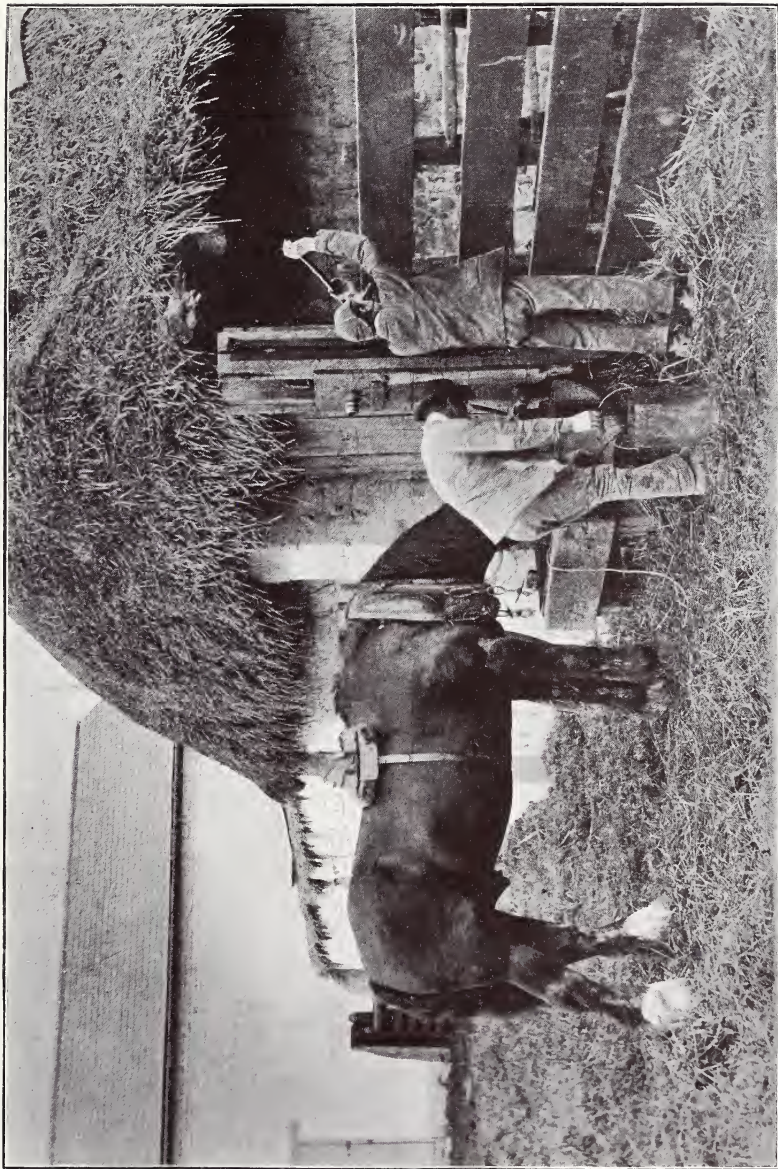


Fig. 26 (p. 48).

А тһрһсһу момент

F. C. Lambert

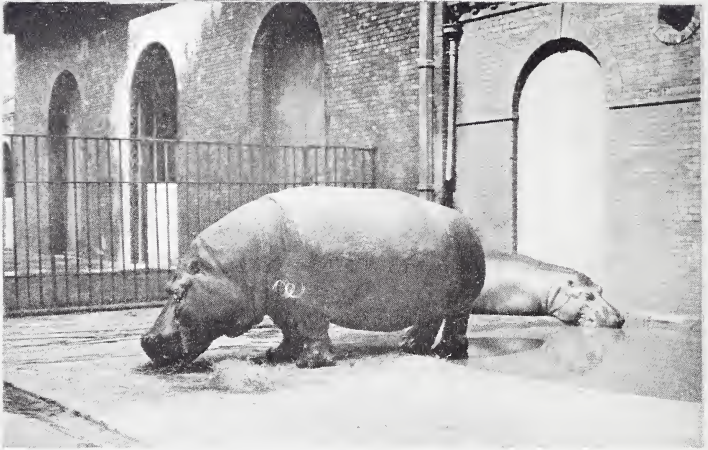


Fig. 28 (pp. 38 and 48).

N. Elliott.

OH! WHAT A SURPRISE!

MAKING A PHOTOGRAPHIC DROP SHUTTER.

A small three-cornered file run through the slit in the screw-head gives it a sharp cutting edge. In using the tool, one must begin cautiously, so as to get a nice clean edge on the check. Should the cut made not be of the depth required, the corner of a sharp paring chisel run along once or twice will finish it off.

Fig. 47 shows the pneumatic release and method of attaching the rubber bulb. For a small sum a watchmaker will supply the piece of old clock spring (N, Fig. 47), and drill the necessary holes for the small screws. If one prefers to do one's own work, the end of the piece of spring will require softening before the drilling is possible. To soften steel heat it to white heat, and allow it to cool slowly.



Fig. 47.

O, Fig. 47, is made from a small piece of sheet brass and bent to shape. Finish off the shutter with fine sand paper, and give it three coats of spirit varnish, rubbing down with very fine sand-paper after the first and second coatings. If mahogany has been used in making the shutter it can be nicely ebonised by going over it with a fairly strong solution of ordinary quick-lime and water. (Get a lump of quick-lime from a builder and put it in a large cupful of water). When the first coat is dry, a second coat can be given of this solution if necessary. When thoroughly dry rub down with sand-paper and varnish. Should a dull surface be preferred, raw linseed oil is used instead of the varnish.

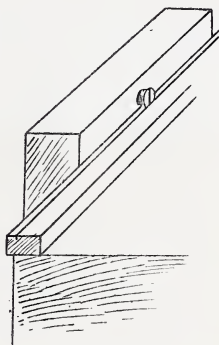


Fig. 48.

Slow drop exposures are given by setting the shutter on the lens at various angles, and to quicken the speed the elastic band C, Fig. 42, is engaged in one or other of the notches, as at D.

The Camera in the Hunting Field.

By O. M. L.



THE Editor acknowledges his great indebtedness to a correspondent, who has kindly placed an album of hunting pictures at his disposal, and also communicated practical experiences, which are summarized in the following note.

For work in the hunting field it is of primary importance that the camera should be of as simple a character as possible, *i.e.*, one that requires little or no getting ready (setting the shutter, altering the focus of the lens, etc.) and equally simple in working (*i.e.*, a "magazine" or other quick changer, an easily manipulated shutter, etc.). For it frequently happens that two, three, or more desirable pictures (incidents or groupings) present themselves in rapid succession. These may be lost if any appreciable time be taken up by changing plates, winding up the shutter, etc.

The Shutter is an item of great importance. The shutter release should work easily, without giving any jar or movement to the camera. Moreover, one should know the *exact moment* when the exposure is made. This is not quite easy with certain forms of release requiring the movement of a lever through a long distance, for one does not know how far the release may be moved without opening the shutter.

Again, the shutter should be either of the "ever-set" variety, or easily and quickly set. For this reason one may hesitate as to the choice of a focal-plane shutter, seeing the time it takes to wind it up. The shutter should have a high efficiency, *i.e.*, it should take as little time for opening and closing as possible as compared with the whole interval of the exposure.

Our friend uses a plate of very high speed, and prefers either metol or paramidophenol as a developer. The latter should only be mixed as wanted and used quite fresh. Hydrokinone is found to be quite unsuitable for this class of work.

THE CAMERA IN THE HUNTING FIELD.

Light and Shade Contrast is also a matter of great importance, seeing that much of the work will be at that time of the year when the sun is low in the sky and the light not very actinic. Moreover, one's eye is apt to be deceived by the light values of the various coloured objects—animals, clothing, surroundings. Those cameras of box form, where the lens is recessed and looks through a door in the end of the box, have the advantage of enabling us to point the lens in a direction nearly facing the sun, as the lens is more or less shaded by the arrangement just mentioned.

What is an Animal?



QUITE a number of people are in the habit of using the word "animal" as equivalent to "quadruped," and would at once answer the questions "is a spider, a fish, a bird, a snake, or human being an animal?" with a comprehensive and emphatic negative. But using the word *animal* in its proper sense this "no" should be "yes."

Laying aside all technical terms and nice differences it may be useful to refresh the reader's memory as to the chief divisions of the animal kingdom.

But first, let us divide all material objects into two great divisions. Living bodies, and dead things.

How are we to distinguish between these?

Living things increase by taking into themselves materials and growing, but if dead things grow at all it is by adding layer to layer on the outside (*e.g.* crystals).

Living things go through a cycle of changes, *e.g.*, birth, growth, death. Dead things do not exhibit these changes.

Living things have the power of reproducing their kind. Dead things have not this power.

Living things are chiefly bounded by curved surfaces, and are of definite shape and size. In dead things we do not find these characteristics, and so on.

We may now divide our "living things" into Plants (Flora) and Animals (Fauna).

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Every one can tell us that an ox is an animal and the grass which it eats is a plant. But when we go lower down the scale, it is not quite such an easy matter to distinguish between the lower forms of animals and plants. The man in the street might, for instance, say that plants are fixed to one place while animals can move about. And though this is true enough in a general kind of way there are *many* exceptions both ways, *i.e.*, of animals which are fixed (such as corals, sponges), and plants which move about (zoospores, etc).

Roughly put the difference between the animal and vegetable kingdom may be stated as follows.

Plants feed on simple substances or compounds, such as, air, water, and dissolved inorganic substances, including ammonia and produce complex organic substances, such as cellulose, starch, gum. They take in carbonic acid gas, and give out oxygen, retaining the carbon to build up their tissues. **Animals** on the other hand take in oxygen and breathe out carbonic acid gas, the oxygen of the air combining with carbon in the body and (frequently) producing animal heat. Animals cannot live on the kind of food taken up by plants, but must have plant-formed matter. Flesh-eating animals get their plant food second-hand by eating plant feeders. No known animal possesses the power of building up organic tissue direct from inorganic matter. Thus plants are the manufacturers and animals are the consumers.

We next divide our Animals into two great groups, *viz.*, **Vertebrates**, having a backbone and not more than four limbs (*e.g.*, man, quadruped, birds, reptiles, fishes, etc), and **Invertebrates**, having no vertebral column or backbone. They may have almost any number of limbs, *e.g.*, insects, spiders, centipedes, crabs, worms, shellfish, etc.

We may now divide up backboned creatures into five large groups :—

Fishes ;—which have gills throughout life and are cold-blooded creatures. Their limbs are fins.

Amphibians ;—which sooner or later develop lungs and whose limbs are never fins.

Reptiles ;—whenever have gills. Their blood is only very slightly warmer than the surrounding medium.

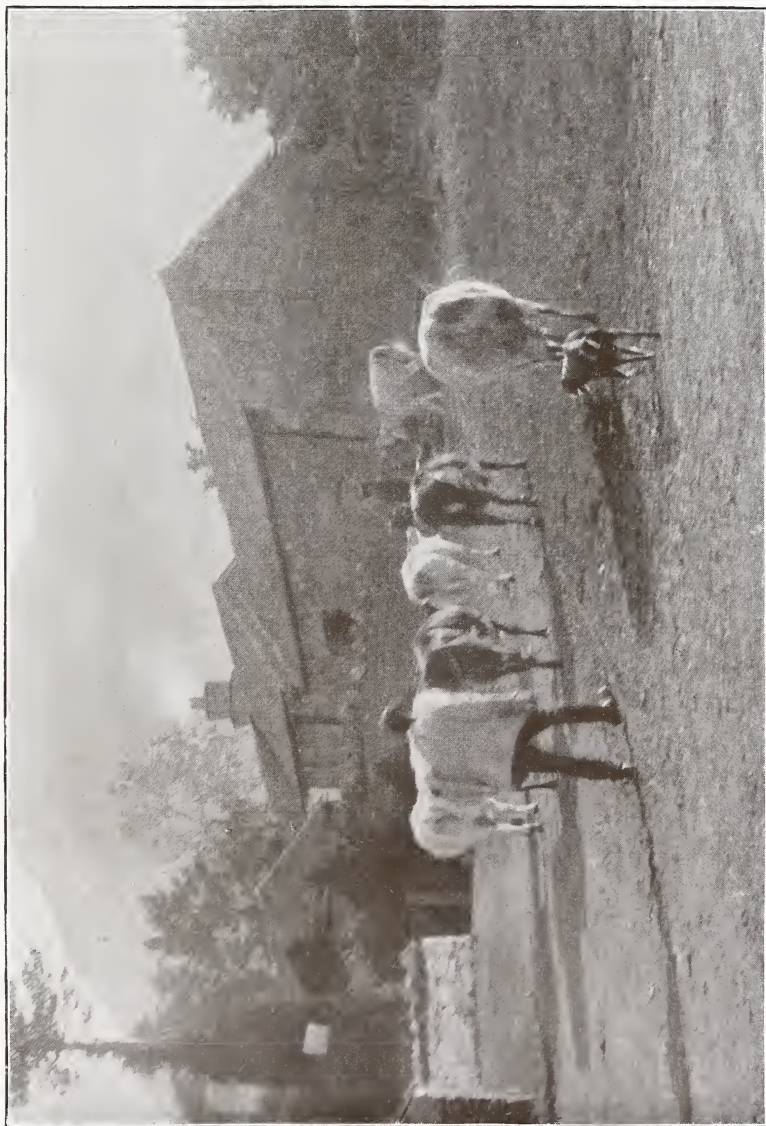


Fig. 29 (p. 48).

MILKING TIME.

F. C. Lambert.

Birds ;—which have warm blood and have their fore-limbs feathered as wings.

Mammals ;—who nourish their young by suckling. The skin at some time always shows hairs.

Thus among **Fishes** we group the tiny stickleback, the toothsome salmon, the hungry shark, and lively eel. But the whale is a mammal, and such things as crabs, oysters, starfish, jellyfish, are not properly called fishes for they have no backbone.

The **Amphibia** are not very numerous in kind. They include frogs and toads, salamander, newt, axolotl, etc.

The **Reptiles** include the turtle, tortoise, snake, lizard, crocodile, etc.

The **Birds** are too familiar to need any further mention except to say that a Bat is *not* a bird but a mammal.

The **Mammals** include man, monkey, dog, horse, cattle, whale, duck-mole, porcupine, lion, kangaroo, armadillo, elephant, rhinoceros, hippopotamus, rat, mouse, squirrel, bat, seal, otter, sea lion, etc.

The **Invertebrata** are divided into a large number of classes—too numerous even to mention. We may instance a few of the more familiar forms.

Mollusca : Oyster, cockle, nautilus, snail, cuttlefish, etc.

Insects : (N.B., three pairs of legs), fly, flea, beetle, bee, ear-wig, butterfly, ant.

Arachnids : (Four pairs of legs), spider, cheese mite, tick, water flea, harvest bug.

Crustaceans : Crab, lobster, shrimp, barnacle, sand hopper.

Echinoderms : Sea urchin, starfish.

Actinozoa : Corals.

Hydrozoa : Jelly fish.

Protozoa : Sponges.

Thus to say that an animal is a four legged creature is no more true than to say that everything that lives in the water is a fish. The common use of the word animal is as much too narrow as the word fish is too wide. The definition of a crab as a "red fish that walks backwards is faulty." A crab is not a fish, not red until boiled and does not walk backwards. Similarly a "black beetle" is not black and is not a beetle.

The Use of Animals in Pictorial Photography.

By THE EDITOR.


ROBABLY the most useful way of offering suggestions on this wide and interesting topic may take the form of a series of (somewhat disconnected) jottings on some of the pictures in this volume. It may serve the convenience of the reader if we deal with the pictures in their numerical order.

Fig. 9 shows us a study of animals more or less in silhouette against the sky. A picture that is all foreground often suggests a considerable altitude which in this particular case entirely suits the case; but were the animals absent we can well imagine that the result would be diagrammatic rather than pictorial. We then see in our first example how important a part the animals play.

The vignettted head of the dog in Fig. 11 is an acceptable variety in dog portraiture. Perhaps just a little more chest and shoulders would have enabled one to apprehend the sitter's character more readily.

In Fig. 13 we have a happy instance of suggestion of movement in the lower animal and rest in the upper one.

The helplessness of the young makes an appeal to every human being. Few indeed are those who do not feel some touch of response. The three little homeless "bairns" in Fig. 14 have a comic and pathetic *ensemble*. The accompanying foliage gives the picture a decorative quality of considerable merit.

The "dog with an object in life" (in Fig. 15) is not only an admirable example of texture rendering, but also is particularly happy and characterful in pose. Although we see but little of the dog's face yet the pose of the head and "live" position of the limbs tell us what he is thinking about.

In Fig. 16 we have an instance of not one but a group of animals forming the chief sentiment of the scene. The long shadows tell of the setting

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sun, and the dust-cloud is eloquent of the dry and thirsty throats in the flock. It should be noted that we have no human figures in this composition. This variation of treatment of a flock of travelling sheep is of interest.

Figs. 17 and 18 both show that it is possible to obtain pictorial representations of animals in captivity without showing their cages. Needless to say both these are studies made in the Zoo. The value of a dark background is exemplified.

In Fig. 19 we have an instructive piece of work. The arrangement is of the simplest character. The strength of this example is due to the breadth of light and shade arrangement. Notice the suggestion of relief and modelling which results from a side light, with a background in shadow,—which must not be confused with a dark background. The position of the King of Beasts is entirely characteristic.

Fig. 20 also conveys some valuable hints in the management of a somewhat difficult background. Quite properly the animal is in sharp focus, but the undesirable, yet unavoidable, background (of railings and foliage) is allowed to be slightly out of focus thus suggesting that it is at some little distance from us. We have been obliged to reduce the size of this picture and consequently have lost much of its fine tone quality. This is an admirable instance of a good zoological study in which is infused a large measure of pictorial quality.

Fig. 21 takes us to the fields in the early morning, when the air is clearing before the coming day. The grouping of the two animals betokens an appreciative eye and ready hand. Truly it may be said of the animal photographer that "he who hesitates is lost," and "the same chance never comes twice." It is all too easy, alas, when photographing cattle in the field to get them either too large or too small for the picture space. The example before us is a happy mean.

As something has already been said on another page as to Figs. 22 to 24 it must here suffice to emphasize the great importance of a background which is not only quiet in character but suitable in tone contrast. Obviously the matter of supreme importance is the truthful suggestion of light and

shade contrast in the animal. If the background be too light or too dark we may accentuate or minimise these contrasts.†

In Fig. 26 we pass to a study wherein the sentiment is centred around the animal. The surroundings are an unfortunate blend of the new and the old. It may be noticed—if we may be excused the “bull”—that the focus of interest (head of horse drinking) is invisible, *i.e.*, hidden by the man.

Fig. 27 is another Zoo picture which exemplifies the needless ugliness of many of the buildings and cages. The original shows the texture quality of the integument exceptionally well.

In Fig. 28 we have an excellent suggestion of the spontaneity of movement which is so characteristic of kittens. The look of intense surprise is happily caught. Here again, a dark and quiet background greatly helps the picture.

In Fig. 29 we rely for pictorial effect chiefly on the suggestion of evening light, by the long cast-shadows, and a broad scheme of lighting, keeping the farm building and hills beyond in large flat masses of tone. The animals are somewhat confused in grouping. Indeed, one would have preferred to have omitted some of them, had it been possible. The man with his back to us gives a suggestion of spontaneity which is acceptable.

Fig. 30 is an example where the animals play a somewhat insignificant part. The picture was an attempt to record or suggest a showery April morning, when the village road was wet and glistening in the gleamy light. The cattle, however, serve to suggest relief of plane behind plane, as we may easily recognise by covering them up for a moment.

Fig. 31 exemplifies the use of an animal to accentuate the interest at a certain point of a composition. Without this half-startled sheep at the turn of the road, our foreground would be monotonous, and there would be a risk of the spectator's interest being carried out of the picture by the wall curving to our right.

† The principles of background contrast cannot be stated in a sentence. But the subject—one of great importance—is fully discussed in the 4th number of the present series of *The Practical Photographer*, “Titles, Mounts, etc.,” page 17, *et seq.*



Fig. 30 (p. 48).

APRIL SHOWERS.

F. C. Lambert.



Fig. 31 (p. 48).

ON THE HELL SIDE.

F.C.L.



Fig. 32 (p. 48).

NO PLACE LIKE HOME.

F.C.L.

USE OF ANIMALS IN PICTORIAL PHOTOGRAPHY.

Fig. 32 shows how a certain measure of humorous sentiment may be suggested by means of domesticated animals around which tradition has gathered certain sentimental associations. The very obvious condemnatory feature here is the irritating background of sky and half-clad trees.

Fig. 33 is a good example wherein the chief pictorial value depends on the group of horses and men. Imagine this group absent, the landscape and sky, though well rendered, would be pointless; or imagine the figure group in broad daylight with a blank sky! This composition well illustrates the sound advice that either the figures *or* the surrounding landscape should unmistakably be of greater importance. Equality of interest would be fatal.

Fig. 34 is an entirely charming bit of sentiment suggestion with an old-world flavour which is characteristically rare in a photograph. This picture well exemplifies the desirability of keeping the pictorial interest well within, *i.e.*, away from the extreme margins of, the picture. The help of a quiet background is also shown.

Figs. 35 and 36 are particularly happy instances of suggestion of movement without the usual grotesque arrangement of limbs.

Fig. 37 is an attempt to record that all-but-human expression which seems to flash across the face of dogs of the Newfoundland breed. The long woolly coat seems adequately suggested. In this instance we have no guide whatever as to the size of this exceptionally fine specimen.

Fig. 38 is hardly to be regarded as a serious attempt—but rather the record of the daily habit of this cat who posed himself in this basket about the same hour every morning, when he could enjoy the warmth of the sunniest corner of the room. The print may serve as a wholesome warning, as the many points of light on the work-basket are all undesirable features.

Fig. 39 serves a useful purpose in showing how scale may be suggested by the introduction of objects of known size. Comparison of Figs. 37 and 39 will exemplify this without further remark.

Jottings on Animal Photography.

By VARIOUS CONTRIBUTORS.



WE are living in the age of specialism. We find it in all branches of science. Why not in photography? There must be thousands of moderately expert photographers, *i.e.*, workers who can turn out a very fair technical negative and print, but who are not endowed with natural pictorial taste. In many cases they can get much pleasure in looking at the pictorial work of others, but when they try to "do likewise" the result is "the usual thing;" merely a good technical print of a bit of landscape or architecture. One cannot say that it possesses any definite faults, except its lack of pictorial quality, taste, originality, freshness, personality. To such workers one may suggest natural history as a field not yet overcrowded with workers, but crowded with material. By natural history, of course, is meant the vegetable as well as the animal kingdom; but for the present the immediate moment we have animals rather than plants in our mind's eye.

Now, by natural history we do not mean the catching of wild animals and putting them in cages and then photographing them, but rather the taking of the camera to the animal in its natural surroundings. True, the bird world has already been receiving some attention lately, yet there is left some room for more work. Again, the smaller animals of the hedgerow, the frog, toad, snail, etc., are waiting their turn.

"Birdnesting with a Camera" is a favourite title for introducing half a dozen pictures of as many different nests at a lantern-slide display; but I have never yet seen a series of, say, half a dozen pictures of the same nest, showing its various stages of building. Again, with the same nest, one might have shown it empty, then with eggs, then the day of hatching, then when the young are half fledged, and finally with the last occupant about to leave the old home. A series of studies of

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some such subject would implant in almost everyone the desire to know more about the ways of the creatures, and thus make the photographer into a budding naturalist. "Once a naturalist, always a naturalist" is a saying which has but very few exceptions.

A Rough List of Animals to be met with in the British Isles:—Horse, mule, donkey, cow, sheep, pig, farmyard poultry (hens, ducks, etc.), dog, cat, rabbit, hare, mouse, rat, otter, badger, weasel, stoat, fox, shrew, mole, bat, frog, hedgehog, toad, newt, lizard, snake, moths, butterflies, caterpillars, beetles, spiders, fishes, birds, etc. The above is only a rough-and-ready list, but is enough to show that the naturalist or animal photographer has a fairly wide choice before him.

Killing Bottle for Butterflies, etc.—Take a wide-mouthed pickle bottle with tight-fitting bung. Pour into it a mixture of plaster of Paris and water to the consistency of cream; allow this to set, and then dry it thoroughly by leaving the bottle (without its cork or bung) on the oven top overnight. Make a saturated solution of potassium cyanide (*caution*, very powerful and dangerous poison). When about to execute a specimen, pour a few drops of the cyanide solution onto the plaster of Paris inside the bottle, and close the bottle for a few minutes. Then introduce the victim and close the bottle again. Be careful to avoid inhaling any of the vapour from the killing bottle or stock solution of cyanide.

Beetles and other small chitinous-covered creatures may be executed by dropping them into boiling water to which has been added a small quantity of formalin and carbolic acid—say ten drops of each per half pint of water.

Small Animals may be killed by introducing them into a bottle into which has been put a small quantity of chloroform.

Killing any Specimens should be avoided whenever possible, not only on account of sacrifice of life,

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but also because a dead specimen cannot be as photographically valuable as a living one.

Movement of Animals.—We may, for our present purpose, divide the movements into the constant movement of breathing and the intermittent movements of locomotion. After an animal has been frightened or been exerting itself it is desirable to let it rest awhile, until the panting has subsided. Under normal conditions the movements of locomotion go through a cycle of changes. In this cycle the characteristic moment should be noted and attempted if it be desired to suggest movement. But if our desire is the securing of a negative showing the least movement, we must aim at the phase of least motion. For instance, if we watch cattle grazing or chewing the cud we may observe certain short fractions of time when their movements are least and others when they are greatest.

Characteristics.—Not only has each animal a certain characteristic form of limbs and surface marking, but it also has peculiarities of position at rest and in motion. The trot of a dog is quite different from the movement of a sheep. Each has its characteristic way of resting on the ground, etc. The student of natural history must not fail to notice and record these matters.

Reflections.—The inexperienced worker may be put on his guard against spots or patches of reflected light from the smooth or shiny surfaces (scales, integument, etc.) of his specimens. This, of course, is particularly likely to occur when the animal has just left the water and is wet. When working with the vivarium much may be done in the way of avoiding reflections by changing the position of operator and object relative to the direction of lighting.

"Points" of an Animal.—Any one who has been present at the judging in a cat, dog, horse, cattle or poultry show will have noticed how the judges compared the various "points" of each genus or variety. An expert animal photographer should



RECLAIMING
THE

JOTTINGS ON ANIMAL PHOTOGRAPHY.

possess enough general knowledge of his sitter to enable him to portray the various "points" according to their relative importance.

The Vivarium, or Cage-Studio.—For the photography of small animals in captivity, such as frogs, mice, and any other specimens likely to escape or move about suddenly, some means of limiting their area of movement is necessary. Thus we require a cage which at the same time shall be our photographic studio. The best plan is for each worker to build his own vivarium, with a view to his own special needs. The following general considerations should be kept in mind:—(1) Abundant air supply for the animals to breathe comfortably; (2) plenty of light for the photographer's needs; (3) space for the animals' movements, but not too great space, so that the depth of focus problem may be as circumscribed as possible; (4) constructional strength to prevent the animals' escape; (5) stability, so that the movements of the animal may not upset "the show" or cause vibration.

Air should be supplied by employing a covering of strong small-mesh wire netting or perforated zinc. This lid or top should be fixable and removable at will by means of small screw hooks (see Fig. 49), screwed to the wooden frame and engaging in holes in the lid. A lively specimen might easily knock off a sheet of perforated zinc unless it were held in some such way as just described. Light is supplied by the employment of white plate glass windows at the front and sides. For this same reason wire netting is better than perforated zinc for the top or lid. The space required will depend upon the size of the animal to be dealt with.

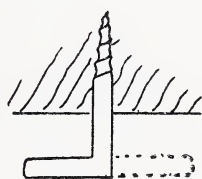


Fig. 49.

A background may be built up by fixing pieces of bark, rock, branches to wire netting, using fine iron wire for fixing the object to the netting. They may be put in or outside the case.

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The inexperienced carpenter can simplify matters in the following way:—First, buy an empty wine packing case, *large* size. The lid may be reserved for cutting up into strips and used for strengthening battens where required. Next with a pad-saw cut out a large window opening in the front and two sides (see Fig. 50), also an oval operating aperture, A, in the back. This aperture should be of sufficient size to enable the lens to look into the cage when pointed in various directions, and should be closable by a sliding door, D, which may be of glass or sheet metal.

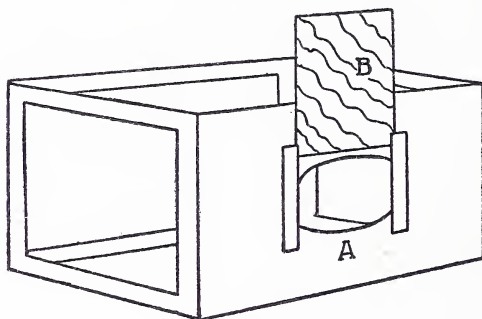


Fig. 50.

The grooving shown in Fig. 51 will explain how this may easily be contrived.

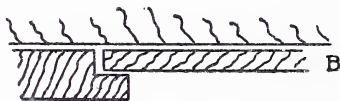


Fig. 51.

The window openings are closed by sheets of plate-glass as shown in Fig. 52, each piece of glass overlapping the aperture by about half an inch. The glass is held in position by four pairs of screw hooks, such as are shown in Figs. 49 and 52. Of course the operator can photograph his subject through any of the windows and the aperture A may be closed either by a transparent or opaque sliding piece.

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The glass of the window panes (Fig. 52) should be as thin as is consistent with the strength of the animals that may be confined in the cage.

The bottom of the cage may be plastered over with cement, in which has been mixed some small pebbles. The corners may be hidden by pieces of bark, twigs, bit of rock, etc. These may be fixed in position by wire loops.

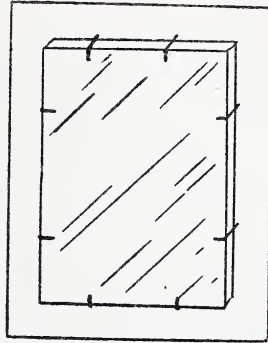


Fig. 52.

As many animals revel in water, the bottom of the cage may be contrived to hold water in the following way:—Get a tin-man to make an oval tray with vertical sides, about $1\frac{1}{2}$ to 2 inches deep, and of such size that a clear margin of two or three inches is left when the tray is put centrally on the floor of the cage. Now apply a thin layer of tallow to the *outside* of the tray. Cover the bottom of the cage with a thin layer (half an inch) of plaster of Paris, and see that it sets quite flat and even. When dry lay the zinc tray on this and add plaster of Paris and shingles up to a depth corresponding with the top of the tray edge. The tallow on the outside of the tray will prevent the plaster sticking to the metal. By this means we fashion a recess in plaster, into which can be put either our water tray or any other thing we please. When the tray is used as a receptacle for water the edges are covered with stones, etc.

The operating aperture may be fitted with a conical tube of strong black cloth or other like material. The larger end of the cone is fixed round A (Fig. 50), the smaller end slipped over the lens hood and held by means of a rubber band. The glass sliding door, B, may be required to prevent a very lively specimen making a dash at the lens and upsetting the camera. But the interposition of a plate of glass between the lens and object is to be avoided whenever possible. Although our vivarium has glass windows at front and sides, it does not follow that we always require light in all

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these directions; indeed it will be found that the best effects are generally obtained when one or other window is closed by placing against the outside a sheet of dark card. Sometimes it is convenient to arrange background objects outside the windows.

The Aquarium is an obvious necessity for the photography of aquatic animals. The general conditions are a supply of changing water for the comfort of the animal; sufficient light for the photographer; a means of limiting the depth of field which can be occupied by the animal; and a ready means of holding the water, etc., in the aquarium without serious leakage.

The essential conditions above mentioned can be obtained by clamping two sheets of glass parallel to each other, but separated by a water-tight partition. The general idea may be gathered from Fig. 53, where GG are the two plates of glass, clamped by the pieces M,N, and separated at the ends and bottom by BB. This separator, which takes the form of "three-sides-of-a-square"—really two short and one long side—may be built up out of pieces cut lengthways from a plank of uniform thickness. The various pieces are fitted together with waterproof cement. On the face of each side and near the inner edge is cut a shallow groove. In this is fitted a piece of round solid rubber and fixed by rubber cement as used by cyclists.

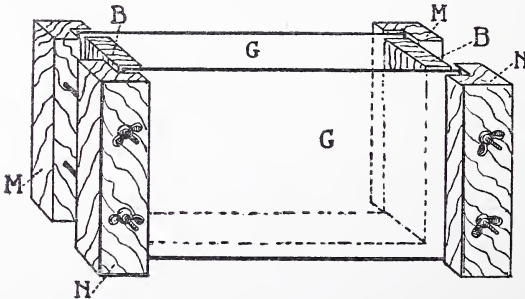


Fig. 53.

In this Fig. the two clamping pieces at the bottom are omitted so that the shape of the separator may be seen.



Fig. 34 (p. 49).

GARGIA AND HER PIGEONS.

Wm. Mason.



JOTTINGS ON ANIMAL PHOTOGRAPHY.

In Fig. 54 is shown the view obtained by looking vertically down upon one end of the tank. BB are the faces of the partition, and GG the glass plates. A long iron clamping rod, with flat head at M, and butterfly nut on a thread at N, passes through both clamping pieces and presses the two glass plates against the rubber rod T and squashes it flat, so forming a water-tight joint.

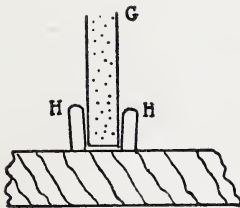


Fig. 55.

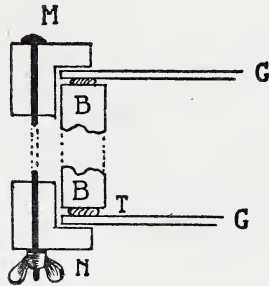


Fig. 54.

If required the tank may be divided longitudinally by a third sheet of glass held in position by metal pins HH driven into the separator BB, Fig. 55. The animal to be photographed is kept in this chamber nearest the lens and the aquatic plant, etc., in the further half of the tank. This tank has the advantage that it may be used with or without water for aquatic or terrestrial animals, as the case may require.

The wooden separator should be well dried, made warm, and then well coated with melted paraffin wax. A hot iron is passed over this to drive the wax into the pores of the wood.

Of course great care is required to keep the glass clean and to avoid reflections.

It must be clearly understood that the sketches are only diagrammatic, and purposely put out of proportion for the sake of clearness.

THE PRACTICAL PHOTOGRAPHER.

Running Water for the Fish Tank.— The supply barrel should be on a slightly higher level than the glass tank. The latter being fed from the former by means of a rubber tube regulated by a screw pinch cock. The advantages of flowing water are various. When the "sitter" is introduced into the "studio" he finds himself in new and strange quarters and often rushes about in search of a hiding-place. This stirs up any sediment, mud, fine sand, etc. and probably makes the water turbid and consequently unfit for fish portraiture. Presently he will find escape impossible and resign himself to the situation. Meanwhile a gently flowing stream will gradually clear the tank water. Again, should he be inclined to hide behind stones or sulk at the bottom, then a fairly strong inrushing stream will tempt him to rise and turn his head against the stream. By adjusting the stream to his comfortable breathing, he will probably remain fairly still for a while.

Weeds, shingle, rocks, shells, and other natural accessories, should be used very sparingly, or they are apt to occupy too much importance in the picture. All one wants is a *suggestion* of naturalness. It is of importance that such accessories should be natural, *i.e.*, such as would be found in the normal habitat of the fish. If the tank containing water plants be placed in good daylight for a few hours before the photograph be taken, and the water slowly changed, the plants will assume natural and pleasing forms; the leaves expand and stalks look more "perky." A few air-bells clinging to the plants add to the natural appearance.

Backgrounds should be plain or very slightly graduated. A large sheet of white card or light grey paper may be naturally graduated by tilting it at an angle so as to catch more or less light. The background should be far enough away behind and beyond the tank to be out of focus, to prevent its casting any shadow on the tank or studio, or to receive any shadow cast by the tank.

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Small Fish may be confined to a narrow space by introducing a plate of glass into the tank, so as to divide it into a narrow front (or near) and wider back (or distant) compartment. The specimens are introduced into the front chamber, and the plants put into the larger back portion. With this arrangement a large stop may be used, because the focal field is shallow and our background of weeds is thus put slightly out of focus, so aiding the suggestion of distance and pictorial depth. If a background of rocks be required, these may be arranged outside and behind the tanks. In that case a side-light would be best.

Cats.—Never attempt to pose two strange cats in the same picture. For they will either stare at each other from a respectful distance, or start fighting. Cats can often be led into position by a few feathers at the end of a string; or a saucer just moistened with milk may serve to catch their attention for a moment, and when this is taken away their eyes will generally follow the direction of its movement.

Kittens and Small Dogs are often intensely interested in seeing any strange thing, but perhaps the thing which interests them most of all is their own presentment as seen in a hand mirror. Of course they take this for some other cat or dog, and for a second or two this produces an expression of attention or surprise. If the mirror is in one hand and the shutter bulb in the other a favourable expression and pose may be secured. A kitten's attention may sometimes be held for a moment by slowly moving the mirror up and down.

A bone or bit of gristly meat at the end of a string is a useful aid in tempting a cat to walk into a selected position. A cat cannot be driven, but may with much patience—sometimes—be led.

Sheep in the Field, or on the Hill Side.—A very slight knowledge of the "ways" of sheep tells us that they are timid things, with good hearing and eye-sight. As a good shepherd knows his sheep

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one from another, so do they soon know him; and should a stranger take his place the substitution will be noted. As soon as alarmed by the approach of a dog or stranger the sheep will run together and combine forces. If the stranger-photographer now approaches they will stampede, and his chances are over for the present. But if he keeps quiet for awhile, and then very slowly and quietly approaches, their alarm will subside, and they will resume their nibbling, gradually separating again and offering him a series of groupings. Sheep cannot be posed or grouped by driving. One has to wander after them quietly and patiently.

Horses at work are nearly always desirable objects for pictorial purposes; for instance, when ploughing, hauling timber, etc. And as in such scenes we practically always include human beings, the picture may and should possess something of that indescribable charm which human occupations bring with them. One of our greatest art critics has extolled the dignity of human labour. Something of the same kind belongs to animals at work, and a study of the philosophy of the subject will show us that a good deal of this charm is due to unconsciousness on the part of the animals and figures. Indeed not a little of the attraction of animals as "sitters" is due to their unconsciousness. If we contrast the conscious and unconscious labouring man we may at once see how great is this factor.

Birds.—Here is a useful tip for inducing birds to visit a certain place during their nesting season. If some of the material which they use for the making of their nests is lightly attached (with thread) to the branches it is desired they should visit, the chances are their sharp eyes will ere long discover the store of desirable material. This device of course pre-supposes some knowledge of the building materials favoured by each species.

Birds are proverbially shy, but hunger will go a long way in the direction of overcoming this shyness. If food be scattered at a certain spot the birds will find it, and will look for it again in the same place. The first day or two no attempt



CHAMPION "RANDY."

Fig. 37 (p. 49).

F.C.I.



Fig. 38 (p. 49).

A SUNNY CORNER

F.C.L.



Fig. 39 (p. 49).

QUITE READY.

F.C.L.

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should be made to visit the spot, but after a while the cameraist may quietly approach nearer each day until he is permitted to get within shutter range.

Aquatic Birds may in the same way be fed by constructing a raft of a few bits of wood and floating the food to the required place.

Sea Gulls are voracious feeders and not particularly timid. A few bits of herrings may be tied with cotton to a light raft of sticks or the lid of an old hamper and towed out to the place where the birds are wanted.

Birds' Nests.—How seldom indeed does one see a bird's nest in photography which really looks like or suggests the real thing in nature. Surely it is a profound mistake to "pluck" a nest from a tree, place it on a neat little table and back it up with a vase of flowers, and call it "A study." A bird's nest removed from its natural surroundings, *i.e.*, the place where the bird put it, loses half its charm and interest.

Another and almost as serious mistake is that of *cutting* away all twigs and leaves, so that what in nature is cunningly half concealed is laid blatantly open. Surely it would be far more natural and pictorial to partly display the nest by bending aside a few of the twigs, and not cutting them.

Spiders' Webs, though not animals any more than birds' nests are birds, yet may consistently be included under the head of natural history work with the camera. They make very beautiful objects for the camera. Three matters of importance should be noted. First, a suitable direction of lighting is necessary to bring out the various strands of the web. Next, a suitable background is essential. This should be as dark as possible, and sufficiently far beyond the web to be out of focus. A piece of black cloth will be found very useful in this connection. If nothing of this kind

THE PRACTICAL PHOTOGRAPHER.

be at hand, sometimes one can cut away all leaves, etc., from near behind the web. Lastly, it may be necessary to shelter the web from wind, which causes undesirable vibrations and prevents a sharp image being obtained.

The Camera.—The less conspicuous the camera (and the camera-ist) the better. Avoid bright and shiny metal fittings, which may reflect light and attract the attention of the object.

The Focussing Cloth is often made of black material with a brilliant red lining. Perhaps this latter is the most likely of all to attract the attention of animals. (The effect of the red rag on the valiant bull is proverbial.) The best focussing cloth for our purpose is a large piece of old and well-worn green baize.

Shelters.—Some good work has been done with a large piece of thin green baize, large enough to cover camera, man and tripod. To the outside is fastened a few leaves and trailers. The camera-ist with tripod erected can then *slowly* move up to his quarry.

Familiarity with the Camera is often one of the conditions of success in animal work. One should be able to put one's finger on the focussing screw, shutter setter, or trigger, etc., with one's eyes shut, nay, without so much as an effort of mind. Again, it is of equal importance that a certain method of procedure should be thought out and followed again and again, until it becomes automatic. One ought not to have to be asking oneself "did I set the shutter, change the plate," etc. Immediately an exposure has been made, preparation should *at once* be made for the next. Of course the second exposure may require alteration of the focussing scale, shutter speed, etc., but these readjustments are additional links in the chain; and the fewer there are to bear in mind the better can one's attention be given to watching one's subject.

The Pneumatic Trigger.—When the camera is set in position, focus adjusted, plate ready for

JOTTINGS ON ANIMAL PHOTOGRAPHY.

exposure, etc., and the camera covered up with branches, the operator may retire to a convenient distance, where he can with binocular or telescope keep watch on the nest and wait for the hoped-for visit of the bird. We are presuming that the shutter is of the bulb-and-tube-release order. Various short lengths of rubber tube may be connected up by inserting into the tube ends a bit of brass or glass tube about three inches in length. These connections should fit the rubber tube fairly tightly. With a long tube a bulb somewhat larger than usual is required. That sold for sprinkling plants—about the size and shape of a *large pear*—will serve very well. If fitted with a spray nozzle this must be cut away, and the tube filed down to fit inside the end of the rubber.

Wind.—A word of caution as to the wind upsetting the camera may be given. To prevent this it may be guy'd by means of three *strong* strings and tent pegs. Care must also be taken to see that a swaying branch may not get in the way at the moment of exposure. Here again string may come in useful.

Domesticated Animals such as the dog, cat, horse, sheep, pig, rabbit, cow, etc., are the best for the beginner to deal with. Those that usually move slowly, *e.g.*, cattle, sheep, horses, grazing in the paddock, can be followed up from point to point until a suitable position and direction of light be secured.

Three requirements for a good animal photographer are (1) *observation*, enabling the worker to recognise the desirable characteristics of the specimen, *i.e.*, position, form and markings, lighting, etc., (2) *patience* until a satisfactory combination of desirable features is presented to the lens, and (3) *perseverance* in spite of a certain—or rather uncertain—number of failures preceding the securing of an entirely successful negative. Of course, rapid plates and a good lens are valuable aids, but they are not so essential as patience and perseverance.

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The Two Methods.—These have been called (1) Stalking—*i.e.*, bringing the camera to the animal amid its natural surroundings. (2) Control—*i.e.*, bringing the animal to the camera, *i.e.*, in a cage, studio, or some other place. (1) This has the advantage of natural surroundings, etc., but is not suitable for small or nocturnal animals. (2) This method enables the operator to make studies of small specimens with ease, but is not so likely to exhibit natural movements or surroundings. Obviously neither method is complete in itself. The two mutually supplement each other.

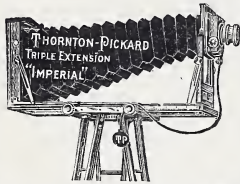
Animal Photography may take several different forms. We may employ the camera to record the form, markings, movements of an animal, *i.e.*, to aid the study of comparative morphology. This may be done by capturing or caging the animal and bringing it *to the camera*. Again we may take the camera *to the animal* in its natural habitat of wood or wilderness, hill or hedgerow. This branch might be termed natural history photography. Or again, we may employ animals as parts of a pictorial composition, to give an interest to a certain portion of the scene, or otherwise help in the arranging of the picture. Or yet again, we may employ animals as the chief feature of a pictorial design, just as human figures are employed in genre or incident pictures. The well-known "Dignity and Impudence," "Shepherd's Chief Mourner," "Member of the Humane Society," are familiar examples.

L'ENVOI.

Farewell, Farewell ! but this I tell,
He prayeth well, who loveth well
Both man and bird and beast.
He prayeth best, who loveth best
All things both great and small ;
For the dear God who loveth us
He made and loveth all.

(Coleridge)

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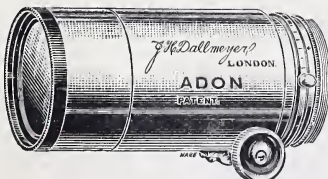
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THE PRACTICAL PHOTOGRAPHER.

Penrose's Pictorial Annual is one of the "yearlies" whose appearance we always anticipate with lively interest. The editor is to be congratulated on having brought together a varied and valuable collection of practical articles on all kinds of process matters such as plates, screens, engraving, inks, printing, etc. The book contains an almost bewildering number of illustrations in monochrome, two, three and four colours, exemplifying the best that present-day printing can accomplish. Our only note of regret is that in some instances the colour of the inks is somewhat crude. But we live in hopes that ink makers will pay increasing attention to the production of quieter shades of brown, sepia, warm black and the like. The printer is to be congratulated on the excellent turnout of the book, which must have cost him no little anxiety.

The Optical Dictionary. Edited by C. Hyatt-Woolf (Gutenberg Press, Fleet Street), brings together in alphabetical arrangement a truly remarkable collection of terms (English, French, German and Latin), connected with Optics and Ophthalmics. The work also includes a considerable number of technical terms of special interest to photographers, such for instance as orthochromatic, sensitometry, circle of least confusion, etc. The editor is to be congratulated on the thorough and careful nature of this book, which should find a place in every photographic society's library.

Prints for Criticism, Competition, etc.

G. B. (Sunderland).—Your architectural study just misses being very good. Note that the pillars are slightly tilted inwards, *i.e.*, camera back was not quite truly vertical. The print generally is too much one-tone value. The margins of the picture to our right and left should both be a shade darker, so as to give more value to the light recumbent figure. The title is suitable and very neatly inscribed.

J. R. R. (Burnley).—"Early morning woodlands" is not so good as your winning print. The picture is too square in shape to suit the subject. The lights are too scattered. Your other shows a marked advance on your former work.

J. T. M. (Newark).—1. Print far too black and white, and the sky part too suggestive of blank paper. 2. Shadows too solid and dark; sky similarly at fault. Both these negatives are evidently too contrasty for bromide work. Try a rough P.O.P. 3. Decidedly better, but still too strong in contrast. You are evidently disposed to carry development too far. Make one or two negatives decidedly softer and try the effect.

E. T. C. (Newnham, O.S.).—We are somewhat disappointed with your entry this time, knowing how much better some of your other work is. The old staircase is a somewhat hackneyed subject, though technically good. The wilderness of white paper round the bird's nest quite kills your high-lights and falsifies the tone value of the blossoms. The Entrance to the Nave has many good points, but the scattered small patches of very heavy darks destroy that most desirable quality of restfulness which is especially wanted in architecture.

W. M. (Selkirk).—1. Contrasts of light and shade doubtless were very strong in the subject, but your print seems to accentuate them. The idea is fresh and worth trying again, but aim at much more softness. 2. This is very dirty-grey-looking snow, and the hard, dark, sharp line against the sky (to our right) sadly requires subduing. Aim to get the lights and shades of the snow more delicate. Make allowance for the wet print darkening on drying. 3. The colour of this print is not at all suitable for a snow subject, and the juxtaposition of the green inner mount has accentuated the pinkness of the snow. For snow there is nothing better than black and white as a rule.

W. B. (Bury).—All things considered, we prefer the smaller print, as it seems to show a rather better range of gradation, but the size of the larger one is much in its favour. The sky in the right-hand upper corner requires darkening a trifle. Both are neatly and effectively mounted. Curiously enough the larger print seems the better of the two when viewed by artificial light.

L. W. (East Ham).—A tasteful little composition. Print itself is too black and white, parts of the water being too white and parts of the near foliage being too black. Try the effect of printing on a rough surface paper, or printing through a layer of clear celluloid.

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W. G. (Doncaster).—Your print is just a little bit inclined to flatness, the land part being largely of one degree of light-and-shade value. You might considerably improve matters by getting the upper part of the sky just a trifle darker, and also the left-hand corner a full shade darker. This might easily be done by covering up the part to be kept back and moving the shading card a little during the extra exposure. Be careful not to carry development quite so far, and so get a little more softness in the distance.

A. E. M. (Port Talbot).—Your picture is just rather too square for our liking. You could well spare $\frac{3}{4}$ -inch from the right-hand side and about $\frac{3}{8}$ -inch from the bottom edge. We are surprised to find you have such a good result as this with such a short exposure at 4.30 p.m. in February.

M. W. J. (Bristol).—1. A bridge is often a very difficult thing to treat pictorially, as the top so often is a prominent line, cutting one's picture into two separate portions. 2. The best part of this is the rendering of the fish on the deck. Try an enlargement omitting $\frac{1}{2}$ -inch from bottom and $\frac{3}{4}$ -inch from the top of this negative. 3. Your flower study is near being quite good, but the blossom is placed too low down on the plate, and you have not chosen your mounting papers to suit your print, and the two inner tints are too nearly the same width. A plain dark green would have been more effective.

E. S. (Watford).—The subject chosen does not lend itself very well to illustrate any very marked remedial difference. Indeed, our expert prefers the original (untouched) effect in some respects. All things taken into consideration your pair of examples shows the most care, and you have wisely not overdone the retouching as so many of the other competitors have. The inexperienced worker is so apt to overwork and loose texture.

R. L. (Castlemartyr).—The colour of your prints strikes us as a little too pronounced, considering the nature of the subjects. A. The chief fault here seems to be the very solid looking tree part along the margin to our left. This looks more an evening than a morning light and shade effect. B. Decidedly good except for colour. The middle distance excellent, but right lower corner is too fuzzy as compared with the foliage at the foot of the near tree. C. This does not strike us as quite true in tone. With such broad and strong sky light we should have more foreground and distance gradation. In other words, the sky light does not harmonise with the land light.

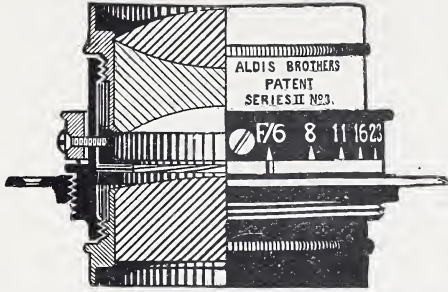
A. T. (Walkley).—1. The ground part seems too light generally for the darker upper part of the picture. Hence a kind of top-heavy effect seems suggested. 2. This decapitated tree is too central, and seems to divide your subject. Read and ponder well what is said on this subject in Number 16. This book will bear reading more than once, and is full of sound advice. Your certificate picture shows a decided advance.

C. B. A. (London, S.W.).—None of your three entries show you at your best. 1. This is too all over-ish, *i.e.*, lacking a focus of interest. What seems wanting is a little more vigour in the nearest part. 2. The small signboard competes with the straw hat for our attention, and the nearest boy's white collar makes a good third. Thus our interest is cut off. Generally the picture suggests under-exposure. 3. This is more of the nature of a study than a picture. The shore part seems too liney and diffuse in interest, and the lower part of the cloud (below the sun) seems also too solid.

A. C. (Leeds).—You have too many lines of light. These sunlit tree trunks cut up your picture into so many stripes of light and dark. Then again, the sunlit leaves on the ground are inclined to be patchy and spotty. Cut away $1\frac{3}{8}$ ins. from left side and you will double the value of what now remains. 2. Distance is too solid looking and too white,—even for a white mist. This you have unfortunately accentuated by the broad black surrounding band of mount. 3. If you will do away with the narrow white strip of mount your picture will be vastly improved. This needs printing on a slightly rougher surface of paper.

G. L. (Leicester).—Your certificated print is decidedly more pictorial than the other two. A. The weak part here is the sky, which is too near being white paper. The middle distance is excellent. Do not use so many different colours of mounting papers with one print. B. This is good in composition, but faulty in execution. Sky and distant hills are a little too dark. The strong light behind cloud near right top corner requires subduing. Try the experiment of covering up $\frac{3}{8}$ inch along the top margin.

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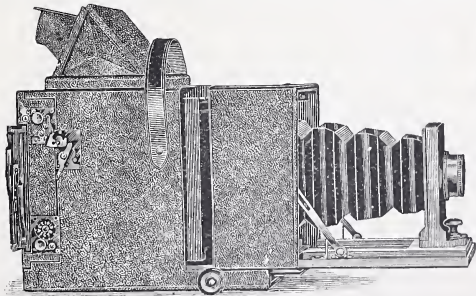
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W. H. A. (Stroud).—A. Not very satisfactory to cut off the top of your flower vase in this way. Roses are too strong in light and shade contrast, and therefore look more like metal than soft, delicate, fragile petals. This delicacy of structure is *one* of the things to aim at in flower work. B. A view of a harbour taken from a point so far above water level is seldom satisfactory, and too much like a bird's-eye view. You have far too much subject matter in this view. The sky and cloud part is very good. C. Your architectural study has many very excellent features, but we think the colour of the picture does not show your work to the best advantage. Try a cooler less red tone.

Miss W. (Corwen).—1. The point of view has been selected with excellent taste, and is quite charming. The strip of roadway to our left is a little too light, and requires subduing. The sky also is too monotonous, and should have been printed just a little darker toward the top. 2. This is not satisfactory. It is presumably a summer scene, and yet it conveys quite a winter effect. The reason is the colour is too cold, and the high-lights too chalky and suggestive of a slight cover of snow in front. Try a print on decidedly rough paper in a warmer colour. 3. Very nearly being quite good, but a little spoiled by the formality of the row of one-two-three shocks of corn. It is also a serious mistake to surround your picture by a series of thin lines. A quite simple tint of quiet toned paper is far better.

C. W. C. (East Dulwich).—Quite a mistake to think that size is necessary for success. Most of our prize pictures are of quite modest dimensions. The most essential thing is to acquire some facility and experience in being able to produce any desired class of negative before enlarging or large direct work is taken in hand. Many fail in thus trying to run before they can walk. Stick to your small size for the present; slow and sure wins the race. Aim at quality, not size. 1. Technically very creditable, but the arrangement is not satisfactory. (Study vol. No. 16). 2. This is much more pictorial. Am surprised you got so good a result with such a brief exposure. Rather too dark. This might be enlarged to about double present size, but cut away lower part as marked on the back. 3. The object in the distance (fireplace?) competes with the figure and should have been omitted.—This negative has been slightly over-developed. Thanks for good wishes.

H. S. P. (Bradshaw).—Not up to your previous form. The exposure was not quite enough for the dark tree trunks. The twigs in right lower corner should have been omitted, otherwise composition is pleasing. Fog not sufficiently differentiated. There seems *nearly* as much fog between us and the nearest tree as there is between us and the extreme distance. This is not likely to be the case in nature.

G. B. (Rotherham)—Very promising indeed for such short experience, and we are very glad to help you in any way we can. 1. You have over-developed your negative, hence the water and sky come too much like blank paper in the print. The best effects in summer time are obtained before 11 a.m. or after 3 p.m. The sun is too much overhead at mid-day. 2. This negative has been over-exposed and necessitated prolonged development.—But your print is technically good. Here, again, the chief fault is the paper-like sky. You might improve this by slightly sunning down the sky parts. Here, again, your exposure was needlessly long even for rain. The composition is spoiled to some extent by the ugly object near the right margin.

M. T. (Morecambe)—Frosted trees against the sky in nature look white against a somewhat darker sky background. But the ordinary plate generally gives us grey trees against a white background. Ortho plates and a pale colour filter are all but essential for these effects. Nothing can be done to your negatives. But another time use Ortho plates and *do not over-develop* or you will lose the charming delicacy of snow and hoar frost. Most negatives of snow scenes are over-developed.

J. F. W. (Ambleside).—It is very doubtful if you are making the best of your negatives by printing them with a white margin, especially in the case of No. 1 where sky and margin run into each other.—Your picture is too monotonous in definition. The normal eye always sees some part of a scene fairly sharply defined. 2. Here the sky coming dark against the light border is better, but the tone value of the snow does not tell against this white expanse of surrounding paper. Then again, a circular shape is very seldom satisfactory as a composition, the outline seems so insistent. Technically this is the better of the two. No. 1 suggests a negative over-exposed and suffering from halation.



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XV.

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THE PRACTICAL PHOTOGRAPHER.

J. W. D. (Surbitou).—Your picture is suffering from flatness, *i.e.*, the kind of flatness which one gets with "cut-out" scenery, on a stage. First, all the objects of interest are at or about the same distance from the spectator, and secondly the absence of well-marked light and shade contrast. Your using so small a stop also tends to emphasize this flatness. 2. This is in some ways better, but here you have included too many objects of approximately equal (pictorial) interest. The sky here (as well as the other too) comes out too light. 3. This is the best arrangement of the three and gives a good suggestion of distance and receding planes. Your white ink titles are far too conspicuous. Try to get a little more strength in the shadows of No. 3. The print is rather weak in the darker end of the tone scale.

H. G. Mc. (Wylle).—1. Cannot suggest any Wiltshire handbook off-hand, but will enquire. 2. Observation of and photographing clouds is the only way. There is no royal road. But Turner's engravings are very helpful. 3. You omit all details of print, so we can only surmise. The *distant* background (of trees?) too dark, does not look distant enough and does not relieve the near parts. Print generally all too much one tone. But its chief fault is that dark band in the distance. We fear nothing can be done to improve this now.

W. M. (Selkirk).—You quite forgot to say if you used a colour screen. A and B are both over-printed—probably to get the clouds out? This tells us that your negatives have too long a scale of densities for the printing process. Before attempting to reduce the negative try some other printing process, such as Carbon, Platinotype, Venus or Luna. With Carbon, using engraving black, you probably would get just the effect you desire. Try an enlargement of C. The white horse illustrates the undesirability of photographing any quadruped "bow-on," *i.e.*, coming straight toward one. In such cases we are very apt to make the creature appear to have only two legs. Technically this is good, but is too small to be appreciated.

G. F. M. (Acton).—1. An agreeable composition, though the two trees are just a little too similar and symmetrically placed to be quite satisfactory. The white inner tint of mount is a mistake here and in No. 2. On this point consult Fig. 17 of *Practical Photographer* No. 4 in the present series. A little more definite suggestion of cloud form would greatly improve. 2. Very seldom indeed that a picture taken high up above water-level is satisfactory. It is too much like a bird's-eye-view, and again, the boat is too formal in position (*vide Practical Photographer* No. 16). Sky better than in No. 1. We advise your cutting away from lower margin just enough to eliminate the boat. 3. Just a little too monotonous. Sky and water all too much one even shade. Avoid oval forms, especially when a line-like band runs from end to end. The water part should be all darker and stronger in light and shade contrast.

A. E. T. (Harrogate).—A. Print has the appearance known as mealiness, suggestive of dampness, and a few spots, also suggestive of calcium chloride dust. Nine out of ten failures with platinotype are due to insufficient care about damp. Did you use a reflector? The shadow side of the face wants a little more light. B. Very nice indeed, except that the upper part of the sky wants just a little toning down. C. Dog too near the background. Contrasts a little too strong. You have over-developed this negative. The brownness may be due to using stale developer, or a dish that has been used for sepia platinotype, or mercurial intensification.

J. J. S. (Buxton).—You have made a bold and very creditable attempt to deal with a difficult problem, and, considering the poor negative you started with, have done as much as you could reasonably expect. But still the final result is not altogether satisfactory. The face is flat in regard to light and shade, and the vignetting of the edge of the feather-hat is not satisfactory.

C. T. (Harrogate).—The blocking-out shows the outline of the hair much too sharp and hard. The shoulders also are similarly faulty. The shadows of the face have been improved, but the print seems "mealy." "Mary" should make a telling portrait. Your original negative has been badly lighted, and your retouching has not been sufficiently directed to correcting this "Sister." The original negative has not enough light and shade contrast, and your removal of shadows has tended to flatten the already weak contrasts.

C. R. (Castlemartyr).—Your original negative appears to have been somewhat under-exposed, and probably also developed a trifle too far. The retouching has improved the light side of the face, but leaves the hair too solid looking and black. The man's vest also is faulty. Your retouching is

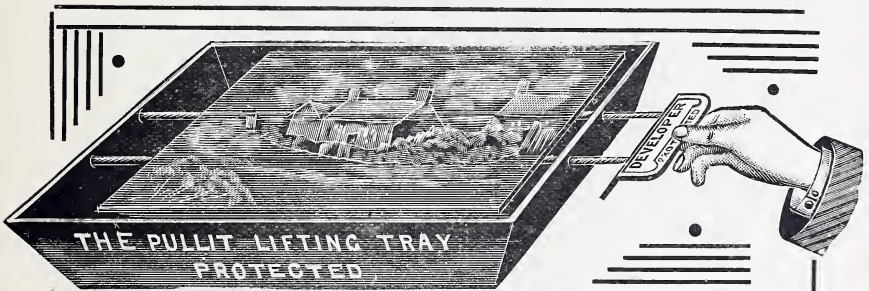
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THE PRACTICAL PHOTOGRAPHER.

inclined to be "lumpy," *i.e.*, to give a puffy look to the flesh. This is partly due to having several high-lights of about equal value. Your work is promising, but you require a little more practice.

A. C. S. (Warrington).—You have made the same mistake in both cases, *i.e.*, carried your work a little too far, and so lost flesh texture and made the skin too much like porcelain. In the case of the younger boy's face you have too many high-lights of about equal strength. In both cases the faces are faulty in lighting. They are too flat, *i.e.*, lacking in the relief that broad shadow gives.

A. C. (West Kensington).—Cambrian Glen. Water too milky or chalky and parts of rocks too light. This points to the exposure being underdone, and perhaps developing also carried a little too far. Running water is best dealt with by a fairly full exposure, ignoring the movement of the water. For if the exposure be at all rapid the water does not look as though it were moving. Thames Willows. The chief fault is that the sky is much too light, too like paper and not enough like atmosphere. The near part of the land, also, should be printed a little darker. Flower study is very nearly being very good. The flower itself is excellent, but the junction line of table and background shows far too strongly (a common fault). And the background is darker than the table, which gives a somewhat top-heavy look. The blossom is a *little* too large for the size of print. Mounting quite suitable.

J. R. S. (Edinburgh).—Very nearly being very good indeed. The sky is good and the landscape is good, but they do not quite harmonise with each other. With such a strong light on the horse one would not expect such a dark cloud effect. Then again, you have got three light openings in the clouds, which seem to cut up one's interest. Nevertheless the work is decidedly creditable.

W. J. A. (E. Dulwich).—Your print arrived badly damaged. It is not up to your best form. You have done better than this on previous occasions. The picture seems to lack a decided idea or design of arrangement. One does not readily see why you took it. A good picture generally says at once what it was that attracted the artist. Then again, the sky is too much like blank paper, and the central dark tree seems to cut up your picture too sharply.

Messrs. Burroughs, Wellcome & Co. have sent us their exposure record and diary for 1905. This desirable pocket volume is now so well known that one need only say that several slight but practical alterations have been made. Thus the monthly light tables are now (more conveniently) together at the end of the volume, and facing the disc exposure calculator. The diary and exposure record are (also more conveniently) now kept separate, and so on, while all the familiar and desirable features are retained. The book is issued at 1s. and 1s. 6d. forms according to binding, and is an entirely desirable pocket companion. Each purchaser is presented with a coupon entitling him to receive a free sample of the famous tabloid photographic chemicals, a choice of some score or so preparations being offered.

The British Journal of Photography Almanac for 1905 makes its timely appearance in its familiar and welcome form. This year the editorial introductory section deals at length with the Present and Future of Photography from various aspects. This is followed by some retrospective notes concerning the last half century. Numerous short notes make up the rest of this issue.

"The Optical Lantern" is the name of a new monthly journal edited by T. Brown and designed to appeal to those interested in cinematograph and lantern matter. The first number includes a chat with Mr. Charles Urban, Illuminants for Optical Lanterns, Stereoscopic Notes, Hints on Cinematographic Work, etc., etc. The new journal has our best wishes for a prosperous future.

From Messrs. Iliffe we have received "Toning Bromide Prints," by R. E. B. Smith. "Intensification and Reduction," by H. W. Bennett; and "Practical Retouching," by D. Butt. The two former are substantially a reprint of two series of chapters which recently appeared in the columns of our contemporary. The last named is a second edition of a work already familiar to photographers generally.

The Book of Photography, Part VIII., is chiefly concerned with orthochromatics and the chemical nature of the Carbon compounds employed in photography. This number includes some examples in coloured ink.

The Leicester Photographic Society's Exhibition is arranged for March 27th to April 1st. Hon. Sec., R. W. Harvey, Oriental Café, Market Place, Leicester.

The Practical Photographer.

Edited by the
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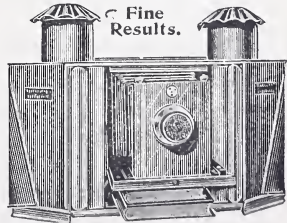
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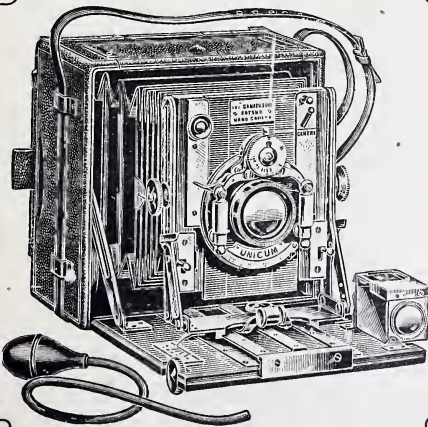
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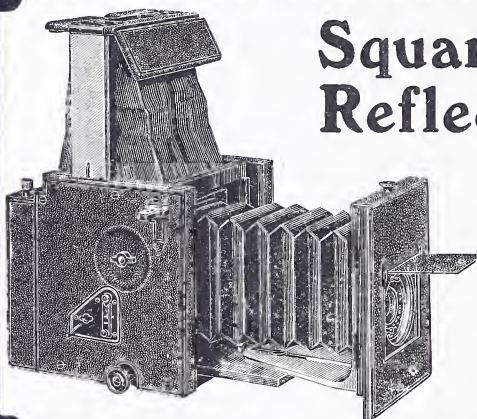
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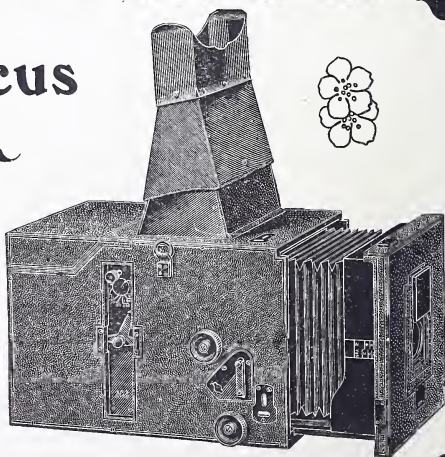


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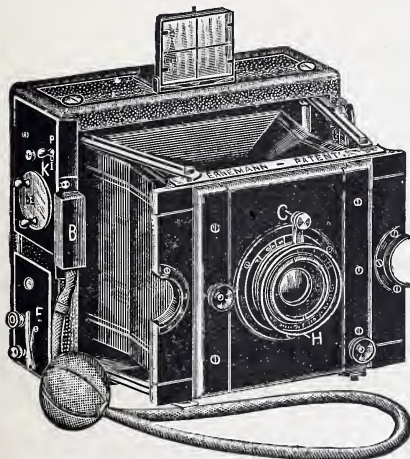
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